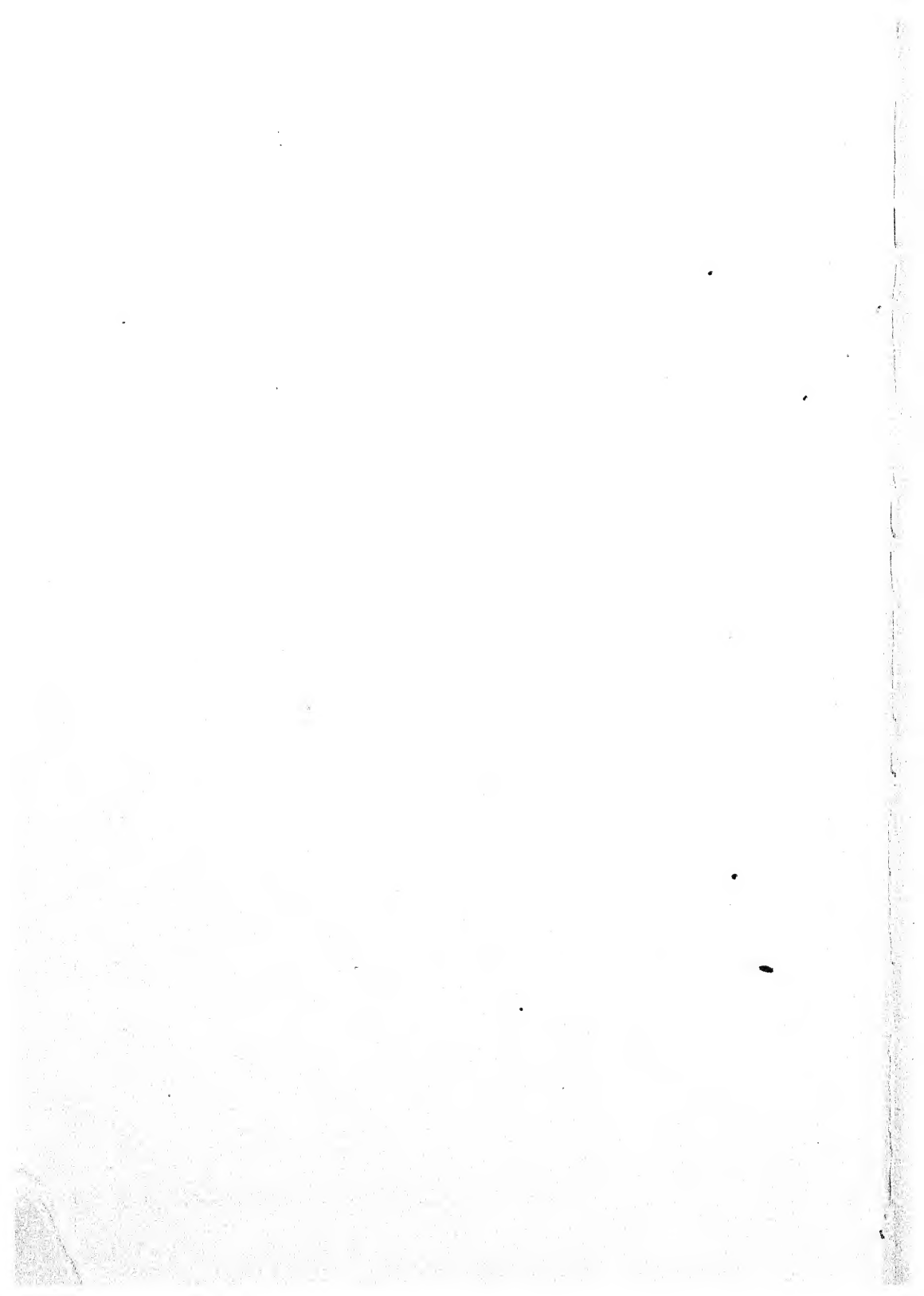


Economics

PRINCIPLES & PROBLEMS



ECONOMICS

Principles and Problems

THIRD EDITION VOLUMES 1 AND 2

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VOLUME 1



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ECONOMICS: PRINCIPLES AND PROBLEMS

THIRD EDITION

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Preface to the First Edition

Economics: Principles and Problems is intended for use in full-year, introductory college courses in general economics. It aims to explain the workings of our economic system in simple, straightforward fashion, and to place before the student the essential factors in economic maladjustments that seem to warrant special attention because of their significance in present-day economic life.

In dealing with economic principles, our chief concern has been to present the subject clearly and interestingly. To this end we have introduced a good many illustrations from actual business practice, with the thought that economics should be taught with an abundance of concrete examples, and that genuine illustrations from the world of business are more effective than hypothetical cases in gaining the interest and enthusiasm of the student. It is our feeling that, in a book dealing with elementary economics, there is much to be said for emphasizing the fact that economic theory is, after all, simply an accurate description of principles that are utilized every day by enterprisers, landowners, wage earners, and capitalists.

Our treatment of economic problems does not contain elaborately detailed statements of the development of the problems, nor does it include pages crammed with statistics. While *history* and *facts* have a place in the study of economic problems, we believe that they may easily be overemphasized. Material of this kind has been introduced into the present work only when it has seemed likely to aid in the *interpretation* of a problem. What we have had in mind is that the student should have a chance, in the case of each problem, to know *what the problem is* and *what might be done about it*. The emphasis, then, is upon *analysis* and *evaluation*, rather than upon history and facts. In giving our own views of the "best" solutions of certain problems, we have done our best to avoid dogmatism. In every instance, we have stated the reasons why the solution proposed appears to us to be the right one.

Opinions differ as to whether the study of economic problems should be preceded by a study of economic principles, or whether the two types of approach should be combined. We have proceeded on the assumption that the latter method is the better, and have interwoven principles and problems in a way which will, we believe, open up the whole field of economics logically and interestingly, and will at the same time impress

upon the student a fact that is too often overlooked—namely, that economics is a subject that has practical, everyday significance.

The authors of this book have been associated for many years in the teaching of introductory economics at the University of Pennsylvania, and in the preparation of the book they have been in almost daily conference. We believe that, as a result of this close association, *Economics: Principles and Problems* possesses a higher degree of unity than is ordinarily found in collaborations.

It is our pleasant duty to express our obligation to Mrs. Margaret Gilfillan for assistance in preparing the manuscript for the printer.

PAUL F. GEMMILL
RALPH H. BLODGETT

Philadelphia, March, 1937.

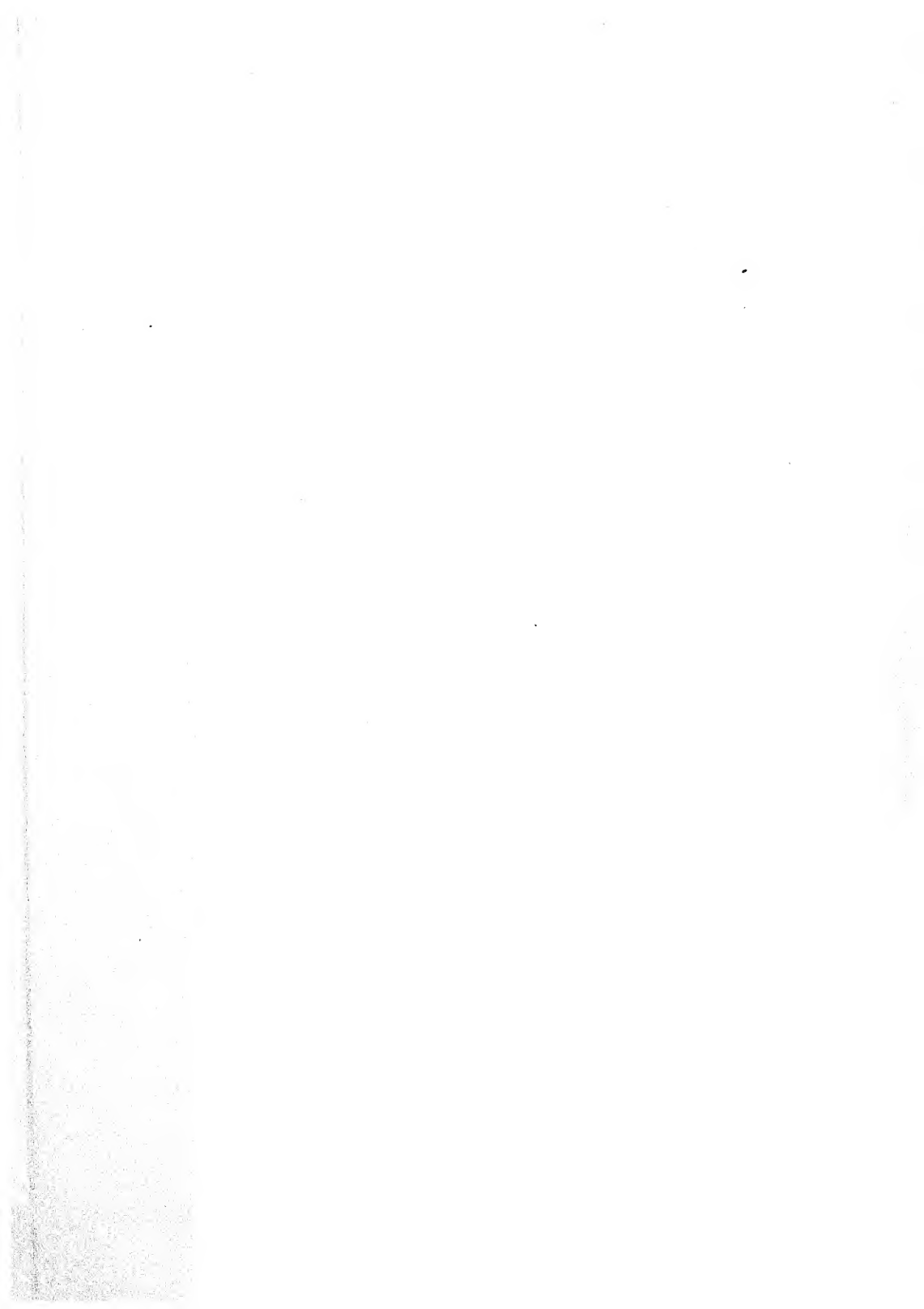
Preface to the Third Edition

Economic changes that have taken place in the past ten years make it desirable to bring out a revised edition of *Economics: Principles and Problems*. The willingness of the publishers to reset the book completely has made it possible not only to make a thorough revision of the material of the second edition, but to give special attention to wartime and post-war developments.

For aid in preparing this new edition, we are deeply indebted to former and present colleagues, and to the many teachers of economics who have given us the benefit of their experience with the first two editions of the book. For their friendly criticisms and suggestions we are most grateful.

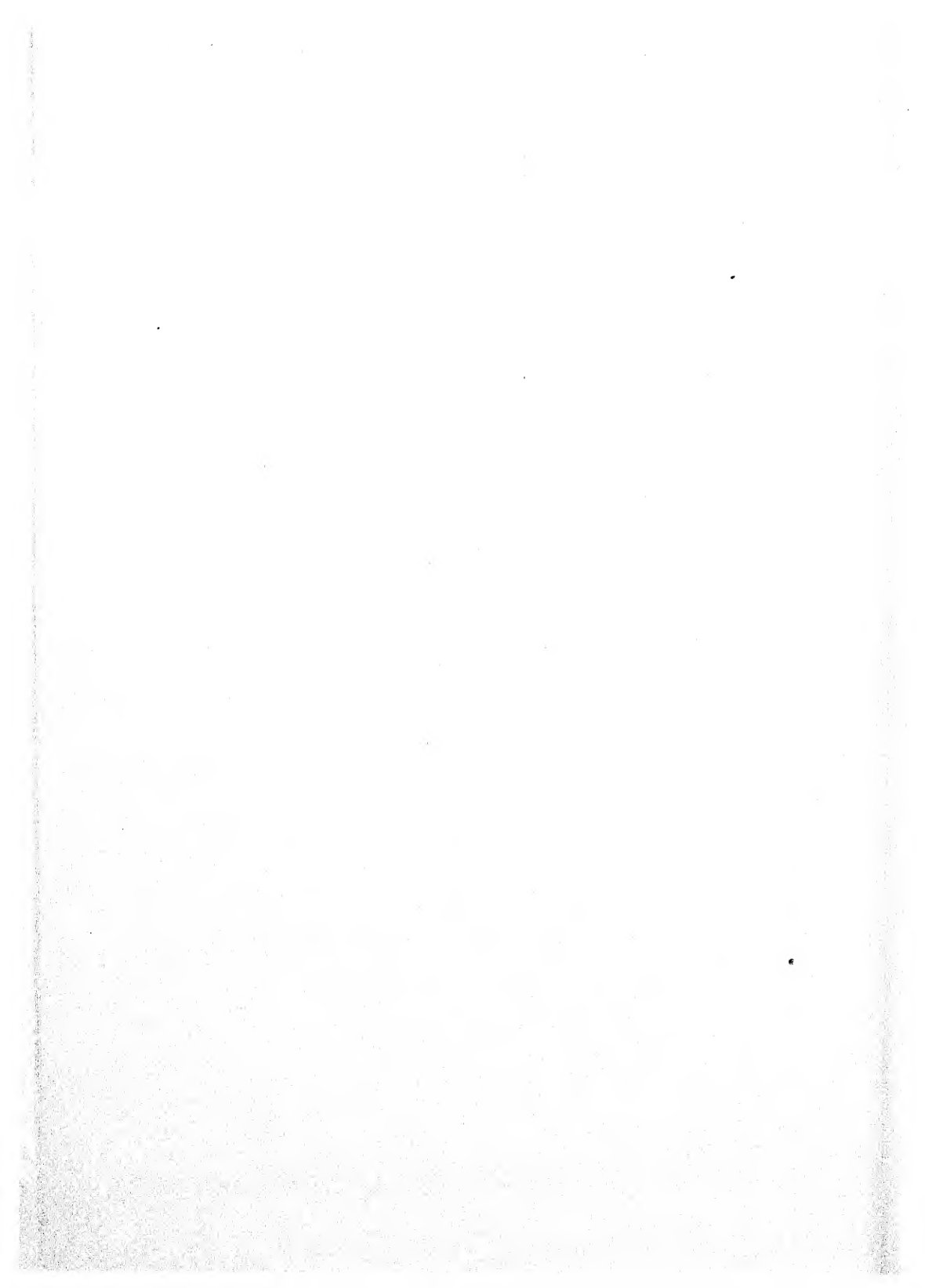
PAUL F. GEMMILL
RALPH H. BLODGETT

January, 1948.



PART ONE

*The Background
for Economic Study*



Economic Science and Its Uses

ECONOMICS IS THE SOCIAL SCIENCE THAT DESCRIBES MAN'S EFFORTS TO SATISFY *his wants by utilizing the scarce means provided by nature*. It deals with the trying situation that arises when a society faces, at one and the same time, a scarcity of goods and a multiplicity of human wants. The subject of economics undertakes to describe, analyze, and appraise the activities by means of which man tries to increase the quantity and quality of goods at his disposal, hoping in this way to reduce to a minimum the disparity between the things he wants and the things he can have.

Two Methods of Approach. Some writers on economics find it convenient to divide the subject into two general groups of items, the first consisting of economic principles and the second of economic problems. For certain purposes, this separation of principles and problems is very useful. However, there is no clean-cut line of demarcation between the two in actual economic life; and in the present work we shall deal with both phases of economics. But it will be well to bear in mind, throughout our study, that economic principles aim to describe the workings of our economic system, whereas economic problems deal with the maladjustments of economic life. Indeed, the purpose of this introductory chapter is to make clear the differences between these two methods of approach, and to point out some of the practical advantages of studying economic principles and problems.

ECONOMIC PRINCIPLES

The Meaning of Economic Principles. We first note the fact that economic principles are sometimes referred to as economic laws, and again as economic theories. These three terms may be used interchangeably, for an economic *principle*, or *law*, or *theory* is always a statement of a relationship that exists in the world of economic affairs. Thus, we have such laws as the Law of Diminishing Returns, the Law of Supply and Demand, and the Law of Comparative Advantage, each of which tells how we may expect certain economic forces to work, under certain stipulated conditions.

A Comparison with Other Sciences. The laws of economics are comparable to the laws of other social sciences, and of the physical sciences

as well, in that they are generalizations which apply only when the conditions set forth have been realized. They describe, therefore, the way our economic system *tends* to operate, and not the way it operates in a specific instance.

In the physical sciences there are some laws which actually "work out" in the laboratory, but not elsewhere, since only in the laboratory are found the precise conditions specified in these laws. For example, the perfect vacuum which is needed for the faultless operation of certain laws of physics does not exist outside the physics laboratory; and, in like manner, the perfect competition assumed in the economist's treatment of supply and demand is never more than approximately realized in actual economic life.

Theory and Practice. This point may well be emphasized, for a good many people seem disposed to think of the laws of economics—and of other sciences—as being "good in theory, but poor in practice." They point out that, in this case and that, a particular law did not "work." Of course, a law which fails to work is a very bad law indeed. However, an investigation of the good-theory-but-poor-practice criticism usually reveals the fact that the critics have not grasped the full meaning of the theory which they attack—that they have *read into* a given economic law something which in reality was not there, or have overlooked an essential part of the statement. It is scarcely fair to condemn a law for not working out in practice if the conditions definitely specified in the law have not been met. The theory that a combination of red and yellow makes orange is not disproved when one mixes red and white and shows that the mixture is not orange but pink—for this latter combination fails to meet the conditions stated in the theory. Nor is an economic law disproved until it is shown that it fails to work out under the *exact* conditions set forth in the statement of the law.

Economic theories sometimes appear to be artificial, for the reason that the conditions of economic life vary widely and are ever-changing. The point is well illustrated in the economist's frequent assumption of perfect competition. We have already said that this condition is never more than approximately realized in actual economic life. It is probable that there are, in the world of business, conditions which range all the way from perfect competition to complete monopoly. But since it is out of the question to devise a statement that will describe all of these varied conditions, the economist ordinarily states in his theory what may be expected to happen under conditions of *perfect competition* or *complete monopoly*.¹ In doing this, he assumes, of course, that those who at-

¹ We are not overlooking the fact that writers on economics sometimes undertake to analyze economic relationships under conditions of *imperfect competition*. Examples of such analysis, as applied to the determination of individual prices, will be found in chap. 16.

tempt to apply the theory to specific instances will make due allowance for whatever deviations there may be from the stipulated conditions.

The Development of Scientific Laws. The principles of economics are developed in much the same way as the laws of physics, chemistry, astronomy, and other sciences are developed; that is, they evolve through a process of *observation*, *statement*, and *repeated retesting*. Physicists, chemists, and astronomers do not lean back in easy chairs, go off into trances, and in this way arrive at the theories we find in works on these subjects. Instead, they make observations, using for the purpose whatever scientific tools they have been able to develop, and after a careful study of the facts they have observed they finally arrive at conclusions which are known as theories, principles, or laws.

In like manner, the economist examines the facts of economic life. He notes that a given set of conditions appears to bring certain results. Having made this observation several times, he begins to suspect that there is a causal relationship between the conditions observed and the consequences that follow. He may even feel justified in drawing up a tentative statement, setting forth the idea that a given set of conditions may be expected to lead to a given result. However, he will not be content with this statement, or be likely to make it public, until he has extended his investigations and found that in a large number of instances—and not once only, or a few times—the conditions described bring about the consequences which his earlier experiments had led him to expect.

Thus, by observation and statement and repeated retesting, an economic theory is evolved. It is fair to say that most economic theories of the present day have undergone very considerable modifications before arriving at their current stage of evolution. When a theory is made public by an economist, it immediately becomes the target at which other economists are likely to begin shooting. This, indeed, is a fortunate situation. Not only does the probability of criticism lead economic thinkers to make sure of their ground before making their theories public, but the attacks upon and defense of economic theories have the effect of refining the original statements. Through a free and open discussion of this kind the statements usually are either discarded as unsatisfactory or reworded so as to be generally acceptable to a large number of economic thinkers. When economic statements such as these have stood the test of years, holding up under the attacks of those who propose contrary theories, they are commonly referred to as economic theories, principles, or laws.

Practical Uses for Theory. An economic theory is usually a brief statement, and yet many pages of print may be required to explain it clearly. This indicates that a theory is simply a sort of shorthand statement of what is often a very complicated situation. It must be remembered, how-

ever, that it is a statement of a relationship which can be expected to work out in practice under the stated conditions.

From what we have just said, it should be clear that economic principles or laws may have practical significance, and that a knowledge of economic theory may be useful, just as a knowledge of the laws of physics, chemistry, astronomy, music, or painting may be useful. One of the valuable features of theories is the fact that they represent relationships which have been arrived at (as we have already seen) through the scientific process of observation and repeated retesting. By accepting theories as *established facts*, we may use them as "starting points" and then proceed to build upon them.

An excellent illustration of building upon established facts may be found in a fascinating volume which tells of man's search for information about microbes.² In this book the author traces the process through which we have acquired the knowledge which now enables us to control, to a large extent, the activities of harmful microbes. There was, first of all, the scientific discovery of the existence of these animal organisms. This was followed by the work of another scientist who learned the method by which microbes are propagated. Building upon this knowledge came the labor of many scientists who isolated specific microbes and discovered the particular human ailments for which these microbes were responsible. And still later followed the investigations of others who, by careful observation sometimes extended over a period of many years, learned how to destroy these parasites without at the same time injuring their human hosts. The work of these later scientists, which has been of the utmost significance in stamping out certain dread diseases, would have been impossible without the pioneer work done by those earlier microbe hunters, who not only made careful investigations but set down the results of their investigations in the form of principles.

Another example of building upon the work of others is found in the development of the earth-inductor compass, which Charles A. Lindbergh carried with him in his memorable transatlantic flight, and which he said made possible this remarkable non-stop trip across the ocean. This compass, which enabled the flyer to pursue his course even though he was out of sight of land, is an instrument built by two scientists who employed in its construction certain previously discovered and stated laws of physics.

Finally, it may be mentioned in this connection that Beethoven was stone-deaf when he wrote some of his most delightful compositions. At first thought, it might seem absurd that a man should be able to compose music that would thrill later generations, without himself being able to hear a single note. But Beethoven's deafness was not enough to stop his career as a great composer. For he knew the theory of musical

² Paul de Kruif, *Microbe Hunters*, New York, Harcourt, Brace & Company, Inc., 1926.

composition, and, armed with this knowledge, he found it possible to write some of his greatest works, including his famous Ninth Symphony, after he had suffered the total loss of physical hearing.

Economic Principles in Business Practice. In the field of business, also, a knowledge of principles may have practical value, both to the individual enterpriser and to society as a whole. Its value to the business man is illustrated in the application of *industrial management*. Industrial management is a modern attempt to substitute definite knowledge, based upon careful investigation and repeated tests, for the "rule-of-thumb" methods, or guesswork, upon which many business men have relied in the past. And just as the use of these scientific principles has proved profitable to individual business men, so also the knowledge and use of economic principles by groups of people—say, by nations—may pay large dividends in the form of high standards of living. That country which gives due attention to the principle of specialization, the principles of money and credit, and the principles of international trade—to mention but a few phases of economic theory which we shall examine—will unquestionably find itself better off than other countries, similarly situated as regards economic advantages, which persist in ignoring the established laws of economics.

ECONOMIC PROBLEMS

The rise of the factory system, which introduced the use of large quantities of capital and the application of mechanical power into industrial processes, dates from the last quarter of the eighteenth century. "Other times, other customs," runs the proverb; and there can be no question that the "other times" in which we live today have brought with them decidedly "other customs," so far as economic life is concerned. Among other things, we have moved from a simple economic system into one that is most complex. The hand process has become the machine process, industrial occupations have become highly specialized, and the independent artisan who was once his own master is now likely to be a factory worker directed by a foreman, who takes orders from a superintendent, who is responsible to a general manager, who, in turn, is under the control of the board of directors and ultimately of a group of stockholders.

In economic life, as in other forms of human activity, changes that are made in the name of progress are often opposed by those who see in the proposed changes a threat to their individual self-interest or to social welfare. The introduction of the power loom was effected only by beating down the objections, and in some cases the persons, of the hand weavers. The movement for free public schools had to overcome the opposition of owners of private schools who feared competition, and of taxpayers who disliked the increased levies necessitated by this social

project. Anti-trust legislation has been championed by those who regard great combinations as a menace to the public good, and condemned by the champions of *laissez faire*³ and those who stand to benefit through monopoly control.

Changes in the economic world almost inevitably bring gains to some persons and losses to others, and, consequently, economic changes give rise to what we call economic problems. Since changes are continually occurring in a growing economic society, we are faced, year by year, with economic problems old and new—the old ones returning from temporary retirement to plague us, and the new arising out of fresh combinations of circumstances and challenging us to solve them if we can.

The Nature of Economic Problems. The existence of an economic problem means the presence of conditions in which the interests of some persons are being affected adversely. Since, in the study of economics, we look at matters from the social point of view, we may define an economic problem as *a maladjustment in economic conditions which results in loss to a considerable number of members of society*. No one who is informed on events of the day will question that such maladjustments do exist, and that they often lead to serious consequences. Violent fluctuations in the general level of prices, involuntary idleness on the part of some millions of workers, the stoppage of streetcar or train service by reason of a strike, the wasteful exploitation of coal and petroleum resources—these are a few of the major maladjustments of twentieth-century economic life that still await solution. They are taken from the long list of economic problems that confront us, and that bring to some members of society a sense of economic injustice and insecurity as well as standards of living lower than we should have if we disposed effectively of these maladjustments.

We have referred to the fact that, as students of economics, we examine conditions from the social rather than the individual point of view. We are interested in studying our economic relationships with the primary purpose of determining their effects upon society, and not upon isolated individuals only. Because economists adopt the social outlook, the study of economics is rightly classified as a social science. And we shall find that many of the problems that we examine are not economic problems pure and simple, but are related, in greater or lesser degree, to other social sciences as well. The problem of population, for example, is an economic problem, by reason of the relationship between population and wages; but it is also a problem in sociology, because of the relationship of population to the family, which is a social institution; and, finally, it is a political problem as well, through its connection with immigration. Few persons would dispute the statement that the tariff problem is both economic and political, or that the problem of poverty may be said to fall within

³ The meaning of this term, as it is used in the literature of economics, will be explained in chap. 4.

the province of economics, sociology, and political science, and not within the scope of only one of these fields.

Interrelationships of Social Problems. Since many of the problems of today are related to several fields of social science, it is sometimes possible to find a remedy for one phase of a given problem while other phases go unsolved. The Negro problem, for example, was solved in part by the freeing of the American slaves. But the abolition of slavery in this country did not solve the Negro problem in its entirety. Its economic phase was not remedied by this step. Indeed, freedom increased rather than decreased the economic difficulties of the Negro; and so serious is the present economic maladjustment of the American Negro that large numbers of our colored population are living under conditions which cannot, with any degree of reasonableness, be considered an "American standard of living." The emancipation of the slaves introduced, moreover, a brand new political phase of the Negro problem; for with freedom came the question of the political status of this large group of citizens, which now comprises about 15 per cent of our total population. This, then, is another phase of the Negro problem that remains unsolved.

Yet another illustration of the complications of present-day social problems is to be found in the much discussed question of prohibition. Whatever one may think of the wisdom or unwisdom of attempting to discourage the use of alcoholic beverages through legislative measures, one cannot fail to see that the 18th Amendment and the Volstead Act brought upon us fresh social problems. The sudden closing of breweries and distilleries rendered practically worthless some millions of dollars' worth of highly specialized capital, threw out of employment thousands of workers whose industrial lives had been spent in the liquor business, and destroyed the market for an appreciable part of certain grain crops. The political aspects of the problem are evident to everyone who followed the presidential campaigns of 1928 and 1932, and the local elections of more recent years. Other serious problems that arose, in part at least, from our attempts to solve the liquor problem by legislation, were a loss of health and even life resulting from drinking poisonous "bootleg" liquors, and a growth in strength (in both numbers and influence) of the metropolitan gangs that prospered from the illicit manufacture and sale of alcoholic beverages. We are not here considering the merits or demerits of either Negro slavery or prohibition, but merely indicating that out of an attempt to remedy a specific social problem maladjustments of other kinds often crop up.

The Importance of Studying Economic Problems

It seems most unlikely that anyone who has kept track of current events during the past few decades could doubt that economic con-

siderations have been playing a leading rôle in local, national, and world affairs, or that they are destined to occupy center stage for many years to come. Are there wars and rumors of war? Then they are more likely than not to have an economic basis, and are certain in most instances to have far-reaching economic consequences. And if happily the paths that we follow are the paths of peace, even then we do not escape the necessity of dealing with economic problems, for business depression, gross economic inequality, financial inflation or deflation, and many other types of economic maladjustment thrust themselves upon us from time to time. In these days of economic interdependence, he is indeed a *rara avis* whose lot is not affected by economic changes. We should be able, then, to assume an interest in economic problems on the part of all members of society. It will be worth our while, however, to indicate briefly several specific reasons for undertaking the study of this branch of economics.

Economic Problems and the Business Man. The interest of the business man in economic problems is very often based upon self-interest. When an enterpriser is threatened by changes that would interfere with securing the land, labor, or capital needed in his business, with converting raw materials into finished products, with marketing his goods, or with retaining for himself whatever income he is able to make his business yield, he is faced with the problem of combating these changes or adjusting himself to them once they have come upon him. That such changes do come must be clear to all who read the newspapers. We need not go far back in history to find instances of governmental restrictions being placed upon the supply of certain kinds of capital, such as raw rubber or tin; of "interference" in marketing, with Better Business Bureaus and similar organizations insisting that goods must measure up to the claims made for them; and of large percentages of profits and managerial wages being taken by the government, through excess profits taxes and income taxes. There can be no question that business men need to know the ins and outs of economic problems that relate to their particular enterprises.

It was a problem of this kind that confronted the United States Steel Corporation in 1921, when the United States first enacted legislation definitely restricting the volume of immigration to this country. The late Judge Gary, who was then president of the Steel Corporation, announced publicly and in no uncertain terms that the erection of immigration barriers would interfere greatly with the operations of his company, by excluding from admission to the United States large numbers of southern and southeastern Europeans, upon whom the steel companies of America depended for their supply of unskilled labor. According to Mr. Gary, a reduction in the number of laborers available for employment in the steel works of the country would inevitably result in higher wages, and, as a consequence, in higher prices for steel. A further pos-

sibility, not emphasized by Mr. Gary, was that of having smaller profits in the event that conditions of demand for steel should not make it feasible to increase the selling price of this product. In any case, there can be no doubt that Mr. Gary was genuinely interested in the problem of immigration.

Similarly, a prominent manufacturer of woolen goods was much interested in an economic problem during the presidential campaign of 1928, and, indeed, was fearful that, through the election of a Democratic President and Democratic House and Senate, he would suffer serious economic loss. He contended that the success of his business hinged upon the continuance of a high tariff on manufactured woolen goods, and that the Democrats, if they got into power, might indulge in so violent a downward revision of tariff rates that he would be unable to manufacture his product in competition with the foreign makers of similar goods.⁴ As matters developed, his fears proved to be without foundation; for the Democratic presidential candidate, before the close of the campaign, not only promised publicly not to tinker with the tariff in the event of his election, but also secured similar pledges from the Democratic members of Congress. The fact remains, however, that this manufacturer is typical of thousands of enterprisers whose attention has been directed to specific economic problems because these problems have threatened the successful operation of their respective businesses.

Of a different sort was the interest manifested by a Philadelphia merchant in the problem of low wages. Though not much given to reading about social conditions, he one day learned from a magazine article that the minimum income on which a family of average size could at that time live comfortably in Philadelphia was \$2000. Upon consulting his payroll, he found that some of his own employees, who were the sole breadwinners of families even larger than the hypothetical family of four persons, were drawing annual wages as low as \$1300. Genuinely concerned over the discrepancy between the wages he was paying and the minimum estimates of budgeteers, he sought out specialists in the field of industrial economics in the hope of discovering a remedy for what he considered a very undesirable situation. Unfortunately, there appeared to be no satisfactory solution of this particular problem in an economic order based upon competition. The incident shows, nevertheless, that an understanding of economic problems is of significance to socially-minded business men—business men whose interest in economic processes

⁴ The problem of the tariff is an important and continuing one, as we shall note in detail in chap. 40 (vol. 2). When, in 1947, the tariff on wool was reduced from 34 to 25.5 cents a pound, the National Association of Wool Manufacturers pronounced this reduction "the most flagrant misuse of delegated Congressional authority ever witnessed in this country." "No conceivable basis exists for saying that any of the existing rates were in any degree higher than necessary," argued the Association. (*The New York Times*, December 1, 1947.)

is not limited to the possibility of extracting large profits from the operation of their enterprises.

Economic Problems and Intelligent Citizenship. But the need for a working knowledge of economic problems is by no means confined to business men. In these days of large-scale collective action, the average citizen is called upon, time and again, to vote, directly or indirectly, on matters of the greatest economic significance.

The end of World War II posed for the people of the United States a whole series of important economic problems. Should this country yield to the appeal of Great Britain for a loan of some four billion dollars to be used in the rehabilitation of her run-down industrial plant? If so, should we exact an interest payment, or grant the loan free of interest? Or should we, perhaps, make the British an outright gift, rather than a loan, because of the widespread devastation of her physical assets suffered in the course of a war in which Britain and the United States fought in a common cause?

Another post-war problem of the utmost significance was the retention or abandonment of the price controls that had been applied with considerable success for several years prior to the termination of fighting. Several very important business organizations urged an immediate return to the "free market," in which prices would presumably be held in check by the interplay of supply and demand. But large numbers of American citizens, most of our academic economists, and the federal administration under the leadership of President Truman argued that the withdrawal of price controls, if it took place before a reconverted industrial system had had an opportunity to replenish depleted stocks of goods, might lead to disastrous inflation and a subsequent depression.

If it should be said that these are exceptional cases, the point may be conceded cheerfully, but with the comment that we are being called upon continually to elect men to represent us in deciding important economic matters, and that we have some responsibility in seeing to it that we are properly represented. We have the privilege of advising our lawmakers from time to time, and of repudiating them when they come up for reelection if they have failed to do our bidding. But this privilege, if it is to be exercised, carries with it the obligation to offer sound advice or none at all, and the ability to advise intelligently rests upon an understanding of the issues under consideration. Shall we change the tariff, and if so, shall we have an upward or downward revision? Shall we nationalize the railroads, as many nations have done, or leave them in the hands of private enterprisers? Shall we have socialized medicine for our citizens, or continue to pay for medical service and hospitalization on a purely individual basis? Shall we yield to the ever-present demand for a lowering of federal taxes, or hold fast to high rates of taxation and use part of the revenue to reduce our enormous national debt? These are samples of

scores of economic problems of the present day that demand attention. We cannot afford to entrust their solution to lobbyists and professional politicians. Maladjustments that affect the public welfare, as most economic problems do, are worthy of the close study of every person who takes his citizenship seriously.

Economic Problems and General Culture. But even to those who do not enthuse over the exercise of the franchise in the interests of economic reform, the study of economic problems may have some appeal as a matter of general culture. If culture is, as Webster says, "the training, disciplining, or refining of the moral and intellectual nature," it would seem that an understanding of the causes of economic maladjustments and their effects upon the welfare of society might well be considered a desirable part of one's cultural equipment. No one who has attempted seriously to analyze any of the major problems of economics today, will question that such analysis does contribute to the training and disciplining of one's intellectual faculties; and it can scarcely be denied that a sincere attempt to set right the maladjustments that so mightily influence human welfare may do something to develop and "refine" one's moral nature.

Indeed, economic discourse has become so much a part of our everyday life that a man takes something of a chance if he leaves home without being prepared to hold his own in economic argument. Not only in the college classroom, but in the restaurant, on the train, or at the club, one is expected to know the best way to settle labor disputes and to have ready a plan for the expansion of world trade! We do not suggest that a study of general economic problems will enable one to attain a perfect grade in these encounters, but it should certainly help to improve one's score. The professional economist himself will sometimes admit that he does not have a sure remedy for every economic ill! But it is possible, in most instances, to get an insight into the nature of a given economic problem and to learn something of the circumstances that have brought about the maladjustment; and it is often feasible to choose from among the proposed solutions of the problem the particular one which seems most likely to relieve the situation, and to know why it appears to be superior to the others.

It would be unreasonable, of course, to expect all of us to be as well versed in problems of an economic nature as the specialists. There is no need, however, for anyone to make the mistake of the business man who concluded that all organized workers were grafters because he had learned of crookedness in a particular union in his city, or to accept uncritically, as many persons have accepted, the editorial dictum that the nationalization of several important fields of economic life in England is necessarily unsound simply because it differs from the economic procedure that has made America great. Not only does the study of eco-

conomic problems provide one with a fund of interesting, important, current information, but it impresses upon one the complexity of certain problems which on the surface may appear simple, and enables one to sift the wheat from the vast amount of economic chaff that nowadays finds its way into our newspapers and magazines. A little learning is proverbially a dangerous thing, but a moderate amount of time given to the critical analysis of economic problems will help to put one on guard against the acceptance of the snap judgments that are offered so freely in conversation and print.

The Feasibility of Altering Economic Conditions

In the opening paragraph of an article in which he discussed the possibilities of world peace, Albert Einstein, the noted scientist, once said: "Let me begin by stating this political conviction: that the State exists for man, and not man for the State. The same may be said of economic institutions. This is an old principle, laid down by those who rated human personality as the highest of human values. I should hesitate to restate it if it were not constantly in danger of being forgotten, especially in this era of organization and standardization." Choosing from this quotation the part that relates to our present inquiry, we indorse most heartily Professor Einstein's suggestion that economic institutions exist for man, and not man for economic institutions. Economic institutions, like other social institutions, have grown up because they have seemed to serve a useful purpose, and when they have outlived their usefulness they can and should be either modified or eliminated.

Man's Control of Economic Conditions. And yet, there are many persons who appear to believe that economic forces are wholly beyond the control of man, and that economic institutions are sacred and must not be tampered with. When workers go on strike, either to force a wage increase or prevent a cut, we are likely to find editorial writers advancing the theory that wages are determined by conditions of supply and demand, that neither employers nor employees can do anything about it, and that it is consequently foolish of labor leaders to call strikes in the attempt to control wages. Now we may accept the statement that the conditions of supply and demand determine wages, and even agree that this will always be the case in a competitive society, without conceding that particular social groups are "in the fell clutch of circumstance" and must resign themselves to whatever wages—high or low—the gods may send. The truth of the matter is that wages will rise whenever the demand for labor is increased without increasing the supply, or the supply of labor decreased without decreasing the demand. As for economic institutions, there is every reason to believe that they can and will be changed whenever society deems a change desirable and takes the trouble to bring it about. A comparison of economic conditions today with those

of a century ago reveals the fact that the institution of private property, for example, which is thought by many to be a prime essential of our economic society, has undergone extensive modifications in this relatively short period.

Some Attitudes Toward Economic Change. It is true, however, that there are many obstacles that must be overcome before any important economic change can be effected. One of the most persistent is the attitude adopted by a surprisingly large number of persons, to the effect that there is no hope of bringing about reforms that involve changes in human nature. This was obviously the view of the member of the Daughters of the American Revolution, who is quoted as saying: "Can any woman pray for peace more than I? . . . But what can we do if it is ordained otherwise? Human nature can never change. Wars can never be eliminated. We must sacrifice and be ennobled. We must give and be rewarded in the hereafter." Obviously, if society in general were to agree with this apostle of despair, there would be an end to all attempts to improve world conditions. Fortunately for social progress, there are many who are convinced that we are not so helpless as we are here pictured. So far as the bogey of "human nature" is concerned, it really matters but little, after all, whether human nature does or does not change, so long as its outward manifestations are brought into conformity with socially desirable ends. It may be questioned that human nature has changed sufficiently, in many millenniums, to affect greatly man's desire to acquire commodities and services; but there can be little doubt that the manifestations of the acquisitive instinct are less likely today than they were in the Stone Age to take the form of physical violence. To most persons this change would seem to be a gain; and the change, it may be noted, is one that is closely related to the development of the institution of private property.

A second notion that has done much to interfere with economic advancement is the curious idea that any sudden or far-reaching change is, for some reason or other, immoral or irreligious. The attitude is illustrated by a pronouncement of the school board of Lancaster, Ohio, in 1828, which read as follows: "Sir, You are welcome to use the school house to debate all proper questions in, but such things as railroads and telegraphs are impossibilities and rank infidelity. There is nothing in the Word of God about them. If God had designed that his intelligent creatures should travel at the frightful speed of fifteen miles an hour by steam He would clearly have foretold it in his holy prophets. It is a device of Satan to lead immortal souls down to Hell." Read more than a hundred years after it was penned, this letter sounds more than slightly ridiculous, but probably not more ridiculous than certain present-day economic views will sound when examined in the light of the twenty-first century. We may feel pretty certain that the wise men of a hundred

years hence will get many a chuckle from reading about twentieth-century opposition to family limitation, practiced in the interests of high standards of living; opposition to the control of credit, designed to stabilize the general level of prices; and opposition to the control of our natural resources, advocated to preserve a supply of raw materials for the use of future generations. We have not as yet, we may frankly admit, got over the notion that there is something immoral about interference with economic *laissez faire*.

Yet another attitude that blocks economic progress is illustrated by the story of a tramp, as related by Lady Asquith in her autobiography. Her account is as follows:

Another day, when it came on to rain, I saw a tramp crouching under the dyke, holding an umbrella over his head and eating his lunch. I went and sat down beside him and we fell into desultory conversation. He had a grand, wild face, and I felt some curiosity about him; but he was taciturn and all he told me was that he was walking to the Gordon Arms, on his way to St. Mary's Loch. I asked him every sort of question—as to where he had come from, where he was going, and what he wanted to do—but he refused to gratify my curiosity, so I gave him one of my cigarettes and a light and we sat peacefully smoking together in silence. When the rain cleared, I turned to him and said: "You seem to walk all day and get nowhere; when you wake up in the morning, how do you shape your course?"

To which he answered: "I always turn my back to the wind."

In things economic, as in so many other matters, a large number of members of society appear to be content to turn their backs to the wind or to drift with the stream—in other words, to allow the force of inertia to prevent their doing anything about economic conditions which they professedly regard as deplorable, but in which they are not sufficiently interested to enter actively into a search for a remedy and a fight to bring about its adoption.

The Complaint of the Tired Reformer. Closely akin to the attitudes that we have described—at least in its effects in retarding economic change—is that of the tired reformer. Mr. Bruce Barton is a specimen of this type, if we may accept his own statement as it appeared in a popular magazine. "The three reasons why I personally have retired from the reforming business," said Mr. Barton, "are: First, because I am getting older. Second, because I think that if every man takes care of his own life and his own family the total result is going to be pretty satisfactory. . . . Third, the forces that are working to make the world better are so powerful and are making such satisfactory progress that they do not need any great amount of artificial stimulation."

The relationship between Mr. Barton and Lady Asquith's tramp should be apparent. Both are fairly well satisfied with conditions as they are, or at any rate both have decided to turn their backs to the wind. There

seems to be, in a case of this kind, more excuse for the tramp than for the tired reformer. Certainly the latter cannot plead ignorance of the situation as a defense of his inactivity; and his suggestion that "satisfactory progress" is being made can scarcely be credited unless the cause he formerly championed is getting along quite as well without his help as with it. However this may be, the defection of those who have been associated with economic reform, and their lapse into indifference, are assuredly responsible in some degree for delaying the changes that must be made before certain economic maladjustments will have been remedied.

Specific Instances of Economic Change. We return now to the main issue of this section of the present chapter, that is, to the feasibility of altering economic conditions. Probably the best evidence that economic conditions *can* be changed is the indisputable fact that economic changes have been wrought in response to demands that certain maladjustments be remedied. Economic insecurity has been relieved to a large extent, in some countries, by social insurance of various forms; the American problem of immigration has led to the erection of barriers against the influx of foreigners; the inelasticity and insecurity that characterized our commercial banking system prior to 1913 have been remedied, in part at least, by the Federal Reserve Act and later legislation; and our tariff rates have been modified, time and again, to bring them into line with the views of the administration in power. These and similar economic changes that are described in this and other works on the subject are proof positive that society is not powerless in the face of economic maladjustments. And we can see no reason why we should not follow wholeheartedly the advice of Professor John Dewey, to "decide upon what we want socially, what sort of social consequences we wish to occur, and then use whatever means we possess to effect these intended changes." This is, indeed, not only the privilege but the duty of a democratic people when it faces social maladjustments of any kind.

The Use of Theory in Solving Problems. One of the sad facts about our reformers of economic conditions is that they often set forth upon their careers of reform, and undertake to solve economic problems, without understanding the principles with which the problems or the proposed solutions are tied up. As a consequence of this limited knowledge of economic theory, well-intentioned but misguided individuals regale us from time to time with economic proposals that are highly fantastic. Every business depression yields its crop of plans for the governmental printing of large quantities of paper money to be used in relieving the "money shortage." Repeated exposure of the dangers of monetary inflation has done little or nothing to discourage these champions of "cheap money." And when unemployment descends upon us, we are informed that the *only* way to provide steady work for all is to cut down the length of

the working day, no thought, apparently, having been given to the possibility of working full time and thus raising our standards of living.

It is into errors such as these that economic reformers are likely to fall if they approach their task without a knowledge of economic principles. Frankly, we know of no way to find sound solutions for economic problems without recourse to the principles of economics. We shall often have occasion, therefore, in the discussion of specific economic problems, to refer the reader to economic theories with which he will by that time have become acquainted. This application of theory to the analysis and solution of definite problems will provide many illustrations of the *practical* nature of economic principles.

A Plea for Objectivity. We must not close this chapter without urging the reader to adopt, so far as he finds it possible to do so, what is often called the "scientific attitude," in his study of economic problems. This does not mean that he need hold himself coldly aloof and remain untouched by the human suffering that accompanies so many of our economic maladjustments, but rather that he should demand factual evidence at every stage of an analysis. He should feel free to reject any and all statements that are presented without the support of either inductive data, or a logically reasoned deduction based upon acceptable premises. In short, he should be "from Missouri," maintaining a receptive but skeptical attitude, weighing critically every scrap of evidence as it makes its appearance, and finally rendering a judicial decision that is free from preconceptions and personal bias. If this procedure is followed, the reader may rest assured that his study of economics will not be fruitless, no matter how promptly he forgets the details of an economic theory or his verdict on the soundness or unsoundness of the proposed solution of an economic problem.

We are not suggesting that the task outlined above is an easy one. On the contrary, it is most difficult to divorce one's thinking from one's personal background and achieve strict objectivity, when considering matters that are as highly controversial and as important personally as are most economic problems. A young man's attitude toward unionism is likely to be colored by the fact that his father is a manufacturer and has had his authority challenged by union officials; his attitude toward a high inheritance tax may be influenced by the knowledge that he will some day inherit a fortune—or, on the other hand, by the certainty that he will inherit nothing, so that even a hundred per cent tax of this kind would mean no personal loss; his impatience with widespread unemployment may be tempered by the fact that he has himself never known real hunger, and by the impression, mistaken but all too prevalent, that it is only the shiftless and lazy who cannot find work. We repeat, therefore, that the achievement of objectivity, or an "open mind," is not easy, but it is a goal that is well worth striving for. There is great need today, in the world of affairs, for disinterested investigators—for men and women who can be

trusted to examine principles and problems in various fields of human endeavor, and to make analyses and propose solutions that are not tinged with self-interest. We ask, therefore, that the reader approach the study of economics in the spirit of impartial inquiry, with a firm determination to discover how our economic system functions and to find out the truth about some of the urgent problems of present-day economic life. We feel confident that this is the spirit that must be adopted if the study is to yield the greatest possible return of pleasure and profit.

1. Define "economics."
2. Indicate the difference between *economic principles* and *economic problems*.
3. Criticize the statement that an economic law may be "good in theory, but poor in practice."
4. The laws of economics describe the way our economic system *tends* to operate. Explain the significance of the word "tends" in this connection.
5. Describe the process through which scientific "laws" are developed.
6. "A knowledge of economic theory may be useful, just as a knowledge of the laws of physics, chemistry, astronomy, music, or painting may be useful." Explain.
7. In economic life, changes that are made in the name of economic progress are often opposed by some persons. Why?
8. Discuss briefly any social problems that appear to you to have arisen out of the following developments:
 - a. The popularity of motor transportation.
 - b. The development of radio broadcasting.
 - c. The growth of the motion picture industry.
9. What is meant by the term "social science"?
10. "Out of an attempt to remedy a specific social problem, maladjustments of other kinds often arise." Illustrate.
11. "We should be able to assume an interest in economic problems, on the part of all members of society." Discuss this statement, under the headings "business success," "intelligent citizenship," and "general culture."
12. Secretary of the Treasury Mellon, in an interview on March 23, 1929, is reported to have said: "It is as impossible to change the present distribution of wealth as it is to cause the earth to stop revolving." Compare this statement with the paragraph in Chapter I entitled "Man's Control of Economic Conditions."
13. There are a good many members of society who apparently feel that "there is something immoral about interference with economic *laissez faire*." Should not these persons, to be consistent, object to interference with mad dogs, smallpox germs, and weeds in gardens; that is, should we not interfere either always, or not at all, with conditions that are socially objectionable?
14. What is the meaning of the "scientific attitude," and why is it important in the investigation of economic problems?

The Nature and Development of Economic Life

THE NATURE OF ECONOMIC ACTIVITY

IT IS IMPORTANT, IN BEGINNING THE STUDY OF ECONOMICS, TO SEE CLEARLY the exact nature of the difficulty that man faces as he goes about his daily task of making a living. It is, in a word, a problem of conflict—the conflict that inevitably arises out of two conditions that are found in every economic society—the multiplication of human wants, on the one hand, and the limitation of goods for satisfying those wants, on the other.

The Multiplication of Human Wants

The saying that man shall not live by bread alone does not carry the implication that he can live without it. He has seldom been content to go hungry when food was obtainable, even though its getting involved a good deal of work, or *economic activity*. Nor has he been willing to suffer from cold and storm if, through economic effort, he could protect himself from the elements by making clothing of skins or textiles and by building himself a hut.

If early man had sternly regulated the rate of population growth, and had remained in those parts of the earth that are free from plant-killing frosts, he might have avoided many economic problems. But he did neither of these things. On the contrary, he increased the seriousness of the economic situation by a rapid multiplication in numbers, and by moving to areas in which nature is less generous than in the tropics. In these colder regions, nature not only yields fewer units of product per unit of labor expended, but at the same time imposes harsh climatic conditions which multiply the number of commodities and services that man must have if he is to enjoy a reasonable degree of safety and comfort.

The Expansibility of Human Wants. However, it is probable that, in any event, an increase in economic activity would have come as the years passed by, for individual wants seem to be capable of great expansion. Generation by generation, century by century, man has not only increased in numbers but the individual members of this enlarged society have been insistent in their demand for more things to consume.

We expect, of course, to find a universal desire for such fundamental goods as food, clothing, and shelter. But once these fundamentals have been secured, there arises a desire for other things; and so strong is this desire that the hope of gratifying it leads people to engage in irksome activities which have as their goal the fulfillment of wants. As for food, clothing, and shelter, we are no longer content merely to satisfy hunger and protect ourselves against the elements. Adam Smith, the most noted of early English economists, wrote, more than a hundred and fifty years ago: "The desire for food is limited in every man by the narrow capacity of the human stomach; but the desire of the conveniences and ornaments of building, dress, equipage, and household furniture, seems to have no certain boundary."

There can be no question of the accuracy of the latter part of this quotation, but Adam Smith's observation about food is correct only as it relates to *quantity* and not to *quality*. It is doubtless true that the capacity of the human stomach is limited, but for all except the very poor eating is more than a process of consuming all the food one can hold. There are cheap eating places at which one may gorge oneself for a quarter, but such a meal is scarcely comparable to a five-dollar dinner at the Waldorf-Astoria. We now insist upon variety in food, and to obtain that variety we send to the ends of the earth for kinds of food that are not grown in our own neighborhoods. Thus the average American consumes coffee from Brazil, tea from Ceylon, sugar from Cuba, and so on; while those in the high-income groups eat grapes from Belgium, caviar from Russia, and other delicacies that do not appear on the menus of the masses. Moreover, the desired foods must be available in season and out of season. Many generations found it possible to get along with dried and canned fruits and vegetables during the winter months. But wants along these lines have expanded, and the past few decades have witnessed a tremendous increase in the demand for green groceries throughout the year, with the result that lettuce, celery, string beans, tomatoes, and other fresh vegetables are imported from warm areas, produced close at hand under glass, or kept in a substantially "fresh" state by the process of quick-freezing.

There is little need to speak at length of the increase in wants so far as clothing is concerned. Whether we are actually better dressed than our forefathers is an open question. In general, the very wealthy have always spent lavishly for clothing, but there can be little doubt that the average person's interest in dress has increased in recent years. He is, to borrow a phrase from the jargon of the advertising man, becoming "clothes-conscious." The almost total abandonment of cotton hosiery in favor of silk and nylon, and the growing popularity of fur coats are but indications of the trend of the times.

The expansibility of human wants is evident, moreover, in the develop-

ment of increasingly elaborate shelter. American homes of long ago may have been regarded as comfortable, and were often larger than those of today, but they lacked many of the conveniences that are now thought of as indispensable. Modern plumbing, electric lighting, and central heating are today taken as a matter of course, though they were almost unknown three-quarters of a century ago. The success of air conditioning in theaters and railway trains, and the enthusiastic public approval of this recent development, point to the probability that many Americans will soon have their homes equipped with air-conditioning plants, so that they may enjoy in summer the artificially regulated temperature that is now provided in winter by automatically controlled central heating.

What has been said above indicates that luxuries speedily become necessities. Once an article possessed by a few has demonstrated its usefulness, the desire for that article spreads like wildfire, and steps are promptly taken, through an increase in economic activity, to make it available for a large number of people.

Imitation and the Expansion of Wants. In the automobile and radio we have excellent illustrations of the multiplication of human wants in a remarkably short period. In 1900, the automobile was virtually unknown; today millions of business and pleasure cars crowd our streets and roads—so many millions that they have created a genuine problem in the handling of traffic. In a single generation, the desire for swift, cheap, convenient transportation has found expression, and to a great extent has also found fulfillment. To satisfy this want required the construction of a vast array of factories of many kinds which in 1940 (before being converted to wartime production) turned out a product valued at more than four and a quarter billion dollars, and will doubtless greatly exceed that output under normal post-war conditions. The automobile, it should be noted, could not be used with complete satisfaction until a great deal of attention had been given to the improvement of highways, for roads that had been good enough for horse-drawn carriages and wagons were far too rough for comfortable travel by automobile and would not hold up under the heavy traffic of motor trucks. Hence, the gratification of one want gave rise to another. This new want, in turn, has been met fairly successfully through extensive programs of road-building. We have now reached the point where every improvement in the roads leads to a new demand for automobiles, and every increase in the sale of motor vehicles leads to a demand for more and better roads.

The radio came into common use even more speedily than the automobile. The explanation may lie in the fact that radio receiving sets are much less expensive than automobiles, and on that account the desire for a radio is more readily satisfied once it is felt. In any event, it is safe to say that in the case of these two articles (and doubtless many others) imitation has played a large part in the expansion of wants.

Indeed, the prestige which may conceivably be won through the purchase of a given good—say, an automobile—may weigh more heavily than its probable usefulness. It would seem that, in a good many instances, the acquisition of a car—or, at least, of one in a given price class—is not so much a matter of transportation as of demonstrating an ability to “keep up with the Joneses.”

“Conspicuous Consumption.” To purchases of this kind the late Thorstein Veblen gave the expressive name, “conspicuous consumption.” He sought to emphasize the fact that many of the most expensive commodities and services produced in a wealthy country such as the United States are bought by certain individuals chiefly for the purpose of impressing others, or “showing off,” and not because they are expected to yield a great amount of genuine enjoyment in use.

It is conceivable, of course, that the Philadelphia “clubman and sportsman” who buys a \$5,000,000 yacht (“the finest private sailing vessel the world has ever seen,” according to the newspapers), the Philadelphia financier who employs two hundred servants in his city house, and the English society matron who owns \$3,400,000 worth of jewels, are spending in this fashion because of the gratification that their purchases yield. But there is reason to believe that many expenditures of these kinds would never be made were it not possible for the wealthy to dazzle their acquaintances, and the general public as well, by spending on a grand scale.

The Desire for Leisure. Another human want that has found growing expression in recent years is the desire for leisure in which to do the things that one likes to do. Not content to work the twelve to sixteen hours a day required of his predecessor of a century ago, the modern wage earner has been demanding an ever shorter working day so that he may have some hours available for *living* as contrasted with *making a living*. This greater leisure is neither a “commodity” nor a “service,” as the economist defines these terms; but it is an important factor in our economic life, inasmuch as time spent in following one’s personal bent does not always, by any means, increase the quantity of goods available for consumption, though occasionally it does. More leisure, of course, may be of greater importance than more goods; but an acceptance of this idea need not blind us to the fact that, in general, the more time people spend in leisure the smaller will be the volume of commodities and services that are available for their enjoyment. When matters are within his own control, the worker may be expected to strike a balance between work and leisure, comparing the enjoyment to be derived from an hour of leisure with the enjoyment to be had from consuming the product of an hour’s labor, and on this basis deciding whether to devote the time to work or play.

The Limitation of Goods

The multiplication of human wants would have no economic significance if the means of fulfillment were unlimited in quantity. This was approximately the case when man's wants were extremely simple, and when, living in the tropics in small numbers, he was able to secure from nature, with little or no exertion, sufficient goods to gratify his desires. But as numbers increased and wants expanded, it became evident that, unhappily, there was available only a limited quantity of the goods required for the satisfaction of human wants. Man was thus compelled to adopt an economic existence; that is, he found it necessary to economize in the use of certain scarce goods.

The Scarcity of Finished Goods. Very few of the goods needed to satisfy human wants in modern times are provided ready-made by nature. Air and sunshine are among the extremely limited number of desirable things that, as a rule, may be had without expenditure of energy. In most cases, the production of useful commodities takes place only when man, using materials and forces provided by nature, makes them serve his ends by working upon them and changing their form. But thus far finished goods have not been able to keep pace with human wants. The volume of physical production has advanced steadily, but human wants have marched along at double-quick. So long as people are hungry, ragged, and homeless, there is no denying that, from the group point of view, there is a scarcity of finished goods. Looked at from this point of view, it is doubtful that there have ever been, in the United States, more wheat, more cotton, more shoes, or more automobiles than the people of the country have wanted and could have consumed to advantage. When farmers complain of an overproduction of wheat and cotton, and manufacturers of an overproduction of shoes and automobiles, they have in mind, of course, not the needs of the people for these commodities, but the ability of would-be consumers to buy at prices high enough to cover all costs of production. Only in this latter sense is there likely to be an over-supply of an economic good.

The Scarcity of the Factors of Production. The scarcity of finished goods is attributable, in turn, to a scarcity of the factors of production. In other chapters we shall speak of the four factors of production—land, labor, capital, and business enterprise. But it will be convenient, for the moment, to simplify our discussion by disregarding two of the four, and dealing with only the primary factors, land and labor. Since capital (as we shall see later) may be resolved into land and labor, and since business enterprise is merely labor of a special type, this temporary simplification of the productive process does not involve us in erroneous thinking. Land, it should be added, must be thought of as including all natural resources, such as soil fertility, mineral deposits, and natural vegetation; and labor, as human effort expended for the purpose of acquiring income.

The Limited Supply of Land. Land and labor are essential to the production of finished goods, but these two factors, as we have said, are limited in quantity. Moreover, the supply of each factor is not of uniform excellence, but varies in quality from very good to very poor. Land, for example, upon which man depends for materials of all kinds, is limited in both area and fertility. Our farmers till the soil to provide society with food. But high-grade agricultural land is scarce, and, as more and more foodstuff is required, land that is less fertile must be brought into use; as a consequence, the yield in product, for each day's work, is smaller than before. The miners of coal, iron ore, and other minerals likewise experience a decline in productivity as the years roll by. Natural vegetation such as forests, and wild animal life such as fish and game, which often appear to be inexhaustible when a country is first settled, show signs of depletion after a century or two of exploitation.

It seems clear, then, that physical goods, unlike human wants, cannot be increased indefinitely; indeed, certain materials such as coal and iron ore cannot be increased at all, so far as the total stock is concerned. When, as in the case of agricultural products, the materials are not definitely and permanently limited in quantity, it is often found that an attempt to increase greatly the total amount of product brings a smaller and yet smaller yield *per unit of productive effort*, and it is possible that an absolute limit may eventually be reached.

The Limited Supply of Labor. The situation as regards labor is somewhat different. We do not have here an absolute fixity of stock as in the case of land area. However, *at any given time* there is available a certain quantity of labor, and no more. Labor is like land in that it consists of various types and grades. Some laborers do better work, or more work, than others, just as some acres yield a better product, or larger product, than other acres. Unfortunately, the quantity of extremely productive labor is small, and when recourse is had to labor of limited ability, it is frequently found that the additional product obtained is scarcely enough to take care of the human wants of the extra workers who are responsible for the increase.

Over a period of time it is possible to increase the quantity of labor by increasing the population. But, though the new workers (after a period of training) constitute an addition to the total quantity of labor available for productive purposes, they add also, and greatly, to the sum total of human wants. It may fairly be questioned whether in modern times an attempt to overcome labor scarcity through a growth in population does not in reality increase, rather than decrease, the difficulties of the situation.

Some of the wants of man find satisfaction in personal services and not in material goods. The physician, the teacher, the actor, and many others who produce no physical commodities are yet greatly in demand because of the desire for the services that they render. Here, again, the scarcity of labor is apparent, since many who crave medical attention, instruction,

and entertainment are forced to go unsatisfied because of the high cost of these services—a cost which is due to the scarcity of labor in these particular fields of economic life.

The Economic Drama

We now have before us the essential elements of the economic drama. There is, on the one hand, man as a consumer of commodities and services, seeking to gratify human wants which appear to be capable of indefinite expansion. On the other hand is a shortage of the material commodities and personal services without which man's wants cannot be satisfied. The scarcity of commodities and services is chargeable to a scarcity of the factors necessary for their production. The material things which man requires can be had only if he cooperates with nature. This cooperation takes the form of economic activity, which is irksome but preferable to enduring a state of want and privation. And the production of services likewise involves economic activity.

Both land and labor, the primary factors of production, are scarce. Even if both are utilized to the utmost, it is still impossible for production to keep pace with the multiplication of human wants. Hence, man is under the necessity of economizing in the use of land and labor. If utilized for one purpose, these factors will not be available for other uses. Not being able to produce all that he would like to have in the way of economic goods, man chooses those things which seem likely to yield the greatest amount of satisfaction. But, discontented, he looks about for ways and means of obtaining more goods with the limited factors at his command. He turns from herding to agriculture, and the result is an increase in foodstuff. He invents a steam engine or a cotton gin, and thousands of workers are set free for other tasks. But there can be no let-up in his search for improvements, for new wants press hard upon him. The struggle is never-ending. The economic drama is a continuous performance.

In the following chapters we shall analyze this drama, examining the cast of characters, the scene in which the action is laid, the motives by which the actors are influenced, and the rewards that are theirs for having learned and played their parts. We shall view the action from several angles, and in greater detail than in the present chapter; but we shall find that the plot is essentially the same, for it is the endless conflict between the multiplication of human wants and the limitation of goods that are capable of satisfying those wants.

HIGHLIGHTS IN ECONOMIC DEVELOPMENT

As we have seen, every increase in man's economic wants has led him to try to devise new ways of satisfying those wants. We cannot undertake

here to trace economic progress from the earliest times to the present day, but we may profitably examine several of the highlights in the "Industrial Revolution," the economic transformation which brought the decline of handicraft industry carried on in the homes of the workers with the aid of simple tools, and the introduction of modern methods of manufacture. Thereafter, large numbers of workers were to be grouped together in factories owned by their employers, operating complicated machines constructed largely of iron and steel and driven by mechanical power.

The Decline of the Manorial System

The date usually given to the Industrial Revolution is the last quarter of the eighteenth century. If the reader wishes a more precise date, he will find 1776 as good as any. Indeed, it is better than most, since it is associated with two other events, the first of which made political, and the second economic, history. The year 1776 marked, of course, the beginning of that great political upheaval, the American Revolution; and it was, moreover, the year of publication of the first important work on economics in the English language—Adam Smith's *Wealth of Nations*.

But the Industrial Revolution, like other revolutions, had a considerable period of growth before it finally came to a head. It could not have taken place had not the ground been cleared by the destruction of the manorial system, which was the customary social organization of Europe in the Middle Ages. We shall describe the manorial system briefly as it existed in England, since it is in that country that the beginnings of modern economic life may be studied most advantageously.

A Glimpse of the English Medieval Manor. The typical medieval manor was a unit of government and of economic life, having a lord as its head. It was virtually a self-contained community, comprising within its population perhaps as few as 150 or as many as 500 people.

The lord was, of course, the governor or ruler of the manor. He was also the personal owner of one-third to one-half of all the land included in the community. The population in general was made up of two main groups. The first was the *freeholders*, who owed military service to the lord. They also paid certain fixed dues as we of today pay taxes. In addition, some freeholders had to render a certain amount of peasant labor, though often they were allowed instead to make payment in money or in products grown on the soil. The majority of the population, however, was made up of *villeins* or serfs, who were peasants in varying degrees of servitude. They were, in a sense, half-free, half-slave men and women, and whatever rights they had were those dictated by the "custom of the manor." They were not free to come and go at will, but were tied to the soil, so that when a manor was sold by one lord to another, the villeins also were transferred.

The medieval manors differed somewhat in size, ranging, say, from

1000 to 3000 acres. A small manor, then, might extend a mile in one direction and two miles in another. We have already noted that a large part (and sometimes as much as one-half of the total acreage) belonged outright to the lord. Moreover, a villein's holdings might be seized by his lord without the peasant having legal redress. Most of the land within the boundaries of the manor was cultivated. This arable land was divided into three great fields for purposes of crop rotation, one of the fields lying fallow every year, the second being planted in wheat, and the third in another grain crop. The three big fields were divided further into plots of approximately one acre each, separated (since there were no fences) by narrow strips of unplowed turf. A peasant's holdings might include as many as thirty of these one-acre plots, scattered about in various parts of all three fields.

Very important was the so-called "waste land," which consisted of woodland, uncultivated meadows, and all other land that was not under the plow. Waste land was used in common by both lord and peasants, and supplied lumber for building, wood for fuel, and pasturage for the domestic animals. The manor house and church were the chief buildings of the community. The peasants lived in rude huts, and man and beast were often housed together. Sanitation was most primitive, scientific medicine was unknown, and (as one writer has put it) "disease made death a common image to the mind."

Since there was almost no contact with the outside world, the inhabitants of the manor lived the stunted, unprogressive, "self-sufficient" existence that usually goes with social isolation. Industry was mainly agricultural, though there were a few specialized craftsmen, such as the miller, the blacksmith, and the carpenter. It seems probable that the most pressing needs of the people of the manor—food, clothing, and shelter—were fairly well satisfied; and it has been argued that "the conditions of the medieval serf, both economic and social, was actually superior to that of many peasants of the present day."¹ But it must not be forgotten that in the matter of food itself, the most urgent of man's needs, there was always the possibility that prolonged drought or excessive rain would destroy the crops, and thus bring famine and starvation to the manor.

The Passing of the Manor. The manor flourished for several centuries, but gradually underwent modifications which led to its final disappearance. Among the important causes of the decline of the manor were changes that related, first, to the people of this medieval community, and, second, to the land itself.

The servile character of peasant life came to an end earlier in England than in other European countries. England was especially hard hit by the great plague of 1348, the "Black Death," which, according to some his-

¹ Huntly Macdonald Sinclair, *A Preface to Economic History*, New York, Harper & Brothers, 1934, p. 23.

torians, destroyed half of her total population. Moreover, her growing textile trade was developing rapidly in the towns, and offered jobs to those villeins who dared to chance fortune and run away from the manors. The consequent shortage of laborers on the manors led to improvements in their status, since it resulted then, as a labor shortage results today, in an increase in the workers' power. With an increased sale of farm products to town-dwellers, the peasants came into possession of money, and often arranged to pay their manorial obligations with money in place of service. "By the time of Elizabeth, the English villein whose forefathers had been liable to be sold, had come to be a man holding so much land and making a fixed money payment."² In other words, the relationship had changed from one of master and slave to that of landlord and tenant.

While the peasant-serf was loosing his bonds and slowly achieving man's estate, things were happening, also, to the land. By the sixteenth century, the development of woolen cloth manufacture had brought so great a demand for raw wool that it was more profitable to raise sheep than grain crops. This was particularly true, because much of the farming land of the manors was declining in fertility. In this century began the Enclosure Movement; fences were built about the acres owned by the lords, sometimes about the "waste land" on which the peasants had rights of pasturage, and even about the great common fields through which were scattered the plots of land held in the names of the peasants themselves. The task of separating the peasants from the land was a fairly easy one. Sometimes it was done by agreement between lord and peasant, but more often by Acts of Parliament as set forth in private bills. Most of the peasants knew but little of their rights in the matter, and it was hard for an ignorant man to establish his claim, however just the claim might be.

The Enclosure Movement continued up to and throughout the eighteenth century. Indeed, it was given a fresh impetus by the introduction of scientific farming in that century. Experiments in grain-growing had shown that with proper selection of seed, constant tillage, and drilling the seed into the ground instead of sowing it broadcast, grain crops could be increased as much as 25 per cent. Meanwhile, experiments in the breeding of domesticated animals brought a threefold increase in the average weight of cattle and sheep. But scientific agriculture is carried on most effectively under centralized control. Consequently, the possibilities that had opened up along this line made the enterprising landlord more anxious than ever to shake himself free from the centuries-old obligations to the peasants, and to get their land completely in his own possession.

²J. L. and Barbara Hammond, *The Rise of Modern Industry*, New York, Harcourt, Brace & Company, 1926, p. 83. The present historical sketch is based largely upon the Hammonds' readable and informative work.

The passing of the manor, painful though it was to certain individuals, unquestionably resulted in economic progress. It had two very important consequences. First, it placed the farming land of England in the hands of relatively few landlords, and thus made it possible to practice scientific agriculture. Second, it released from the manors large numbers of farm workers who, moving to the towns, provided a labor supply for the growing manufacturing industries, and thus hastened the introduction of the factory system of production.

The Revolution in Iron Manufacture

Even the ancients knew how to extract iron from iron ore and fashion it into weapons and other useful articles. England, with her abundant supply of iron ore, was an important producer of iron long before the Industrial Revolution. Indeed, the extensive use of charcoal in iron manufacture led to the depletion of much forest land as early as the reign of Elizabeth. For charcoal is made of wood, and the iron industry required so much charcoal for fuel that the forests of England were rapidly exploited to meet this need. By the beginning of the eighteenth century, the situation had become so serious that persons interested in the iron industry were genuinely disturbed.

The Use of Coke in Smelting Iron. The solution of the problem was found by Abraham Darby. Darby got hold of an old blast furnace for smelting iron, and began experimenting. He finally discovered that coal could be used satisfactorily as a fuel in blast furnaces, provided a particular kind of coal was used, and provided it was converted into coke before being burnt in the furnaces. Coke is made by subjecting coal to intense heat in a retort, thus driving off certain gases.

Coal, in the form of coke, was first used in blast furnaces in 1750. The substitution of cheap coke for expensive charcoal in smelting greatly lowered the price of iron, and stimulated iron production in England and elsewhere. Cheaper iron led to its wider use. Iron was first used in 1767 for making rails on which cars in coal mines were drawn by mules or human beings. The first cast-iron bridge was built in 1779. Abraham Darby's discovery continues to influence production today, for practically all pig iron of modern times—and pig iron is the basis of steel—is manufactured with coke, made from coal, as the fuel.

The Use of Coal in Forges. Other important changes in iron manufacture were introduced by Henry Cort, in 1783 and 1784, in the production of bar iron. Bar iron is pig iron that has been alternately heated and hammered. This process makes the iron especially tough and strong, and suitable for some purposes for which pig iron cannot be used. Paralleling Darby's pioneer work in devising a cheap blast furnace fuel, Cort discovered how to use coal in forges in place of the scarce charcoal, and substituted rollers for hammers. Thus "Cort changed the whole history of

the iron industry in England. Fifteen tons of bar iron could now be produced in the time formerly required for producing a single ton. . . . Again, the new bar iron was of superior quality, useful in every purpose except that of providing raw material for steel."³

The Use of the Steam Engine. The rapid growth of the iron industry is shown in the fact that England's output increased from 68,000 tons in 1788 to 125,000 tons in 1796, and doubled from 1796 to 1806, with a total output of 250,000 tons in this latter year. In the production of bar iron she became a great exporting instead of importing nation.⁴

But the credit for this expansion does not belong wholly to Darby and Cort. Iron has been called "the great saver of time, and chief engine of thorough solid work," because it enters so largely into the manufacture of labor-saving machinery. But the extensive use of machinery is feasible only if there is available a continuous, dependable supply of mechanical power. Apart from human energy, horse power, wind power, and water power were used for driving machinery, prior to the invention of the steam engine. Doubtless the most satisfactory of these was water power, which is in fairly common use even today. But water power, as applied before the development of hydroelectric energy, had limitations. In the first place, the source of power sometimes ran dry in periods of drought, and, second, the power itself could not be transferred from place to place.

James Watt's Invention. By developing a workable steam engine, James Watt made a contribution to industry the value of which can scarcely be overestimated. Coming in the last quarter of the eighteenth century, the steam engine arrived in time to be of service in a hundred ways. Its operation was wholly independent of weather conditions. It was readily portable, and permitted industries to be located with an eye to such advantages as raw materials, labor supply, and markets. Its use in pumping water from the mines cheapened the production of coal. Its use in blowing a forced draft through blast furnaces aided in the production of iron. Finally, its adaptability to almost every kind of machinery greatly increased the demand for mechanical aids, stimulated invention, and did much to convert handicraft industry into the factory system.

Developments in Transportation

Turnpikes in the Eighteenth Century. The Romans were great road-builders, and built some excellent roads in England. But these and other roads were neglected and allowed to fall into disrepair, so that the roads of eighteenth-century England were about as bad as roads could be. In some cases, they were impassable during many months of the year. Pack-horses were more common than carts, because, except in the best weather, it was almost impossible to pull vehicles through the deep mud. Indeed,

³ *Ibid.*, p. 140.

⁴ *Ibid.*, p. 143.

Daniel Defoe, in describing the mire, wrote that "the horses sink in it up to their bellies." There were few stagecoaches, and those that ran were slow. In 1700, for example, it took a week to go from London to York, a distance of about 180 miles.⁵

The remedy for bad roads is good roads. The construction of new highways in the eighteenth century was carried on mainly by turnpike trusts, authorized by Parliament to build roads and pay for them with tolls collected from the users. There was prompt and pronounced improvement in transportation as a result of this campaign in road-building. Stagecoaches were able, with good roads, to supply regular, swift service between the leading towns. For example, six coaches a day carried passengers from Manchester to London, and the distance (approximately 170 miles) was covered in only twenty-four hours. Wagons for hauling merchandise were also put on a regular schedule, making it possible for merchants to deliver their goods promptly.

The Development of Canals. But the cost of transportation by horse and wagon was high, and in the case of some kinds of heavy, bulky goods was quite prohibitive. The need for cheap transportation was felt particularly in hauling coal, which (following Abraham Darby's discovery) was substituted for charcoal in the manufacture of iron. Since water transportation is relatively cheap, a program of canal-building was determined upon. The first canal in England was built in 1750, and within fifty years 3000 miles of these artificial waterways were constructed. In many instances the cost of hauling was cut in half, and a great stimulus was given to certain industries which had been hampered by the former high cost of moving raw materials or finished products.

The Benefits of Good Transportation. It is safe to say that no single factor is more important than good transportation in building up an efficient economic system. We shall later examine the great advantages of "specialization" and "exchange." But extensive specialization and exchange are dependent upon cheap, speedy transportation, and cannot exist without it. The building of highways and canals put an end to the economic isolation of manorial England. By so doing, it broadened the markets for manufactured goods—that is, it increased *exchange*. Moreover, the enlarged market for goods made it feasible for a worker, or plant, or even a community, to give undivided attention to a single type of production—that is, to adopt the principle of *specialization*. Thus, the development of transportation did much to help build up our modern industrial system.

The Rise of the Factory System

Such manufacturing as existed in medieval England was carried on either in small shops by a master workman and a few apprentices, or in

⁵ These illustrations are from *ibid.*, pp. 70, 71.

the homes of workers who were supplied with raw material by an employer and paid by him when they had completed their tasks. The chief characteristics of this type of industry were, first, the small size of the industrial unit, and, second, the use of little machinery. But this "handicraft" or "domestic" industry gradually gave way to the *factory system*, which employs large numbers of workers in a single plant and uses power-driven machinery in considerable quantities.

The Part Played by Textiles. England was the natural setting for the introduction of the factory system, since she was industrially the most advanced nation of the eighteenth century. It is not surprising that the textile industries played so important a part in the Industrial Revolution. In the first place, woolen and cotton manufacture were leading English industries, and, second, the production of textiles lends itself readily to the machine process. Machinery is especially suitable for handling raw materials of a homogeneous nature. Cotton and wool are materials of this kind, since every pound of cotton of a certain grade is like every other pound of that grade; and the same is true of wool. Hence, it is a fairly simple matter to devise a spinning machine to turn cotton into thread, or wool into yarn. Moreover, cotton thread or woolen yarn, since it again possesses the property of uniformity, may again be intrusted to a machine—a loom—and thus be woven into cloth.

Great Inventions in Textile Manufacture. A whole series of eighteenth-century inventions in the textile industry was largely responsible for the introduction of the factory system. The *flying shuttle* (1733) was an invention that affected weaving. It enabled one workman to do the work formerly done by two, and created a demand for more yarn than the spinners could supply. Prizes offered for the development of spinning machinery brought forth, in 1770, the *spinning jenny*, which first did the work of eight, and later of a hundred old spinning wheels. In 1775 came the *roller spinning frame*, worked by water power; and spinning became a factory process. In 1779, the spinning jenny and spinning frame were combined into the *spinning mule*, which produced a finer and stronger thread. The *steam engine*, first used in a cotton mill in 1785, made spinning a factory task even when water power was not available. The *power loom* was also introduced in 1785, and made weaving a speedy factory operation. Finally, in 1793, came Eli Whitney's *cotton gin*, for removing the seeds from the cotton fiber. Cotton now became plentiful and cheap.

This brief sketch of the evolution of cotton-manufacturing machinery gives an idea of the development of the first great factory industry. The expansion of the industry is indicated by the tremendous increase in American exports of cotton. The United States was then, as now, the leading producer of cotton in the world. Her cotton exports in 1793, the year of the invention of the cotton gin, totaled about 500,000 pounds.

Ten years later, in 1803, it was 40,000,000 pounds, or eighty times as great.⁶

Some Effects of the Factory System. The present textbook will undertake to describe and analyze our modern economic system as it developed from these early beginnings. At this point we may note that the factory system brought a greater abundance of wealth, though not necessarily more wealth for everyone. It led to a greater uniformity of product, which was in some ways an advantage and in others a disadvantage. It increased the dependence of man upon man, and community upon community. It separated the worker from his product, and raised the question as to whether he was being paid "all he was worth." Finally, it increased the monotony and irksomeness of industrial labor, by increasing the amount of repetitive work. Hence, the rise of the factory system was not an unmixed blessing, as we shall note in greater detail in later chapters.

Economic Developments Since the Industrial Revolution

The decline of the manorial system, the revolution in iron manufacture, eighteenth-century developments in transportation, and the rise of the factory system were important factors in shaping the beginnings of modern economic life. We have been especially anxious to picture the transition period from the old type of industry to the new, and shall be able here to give only a page or two to developments of the nineteenth and twentieth centuries.

Agriculture has become increasingly scientific during the past century and a half, and the invention and wide use of farming machinery have lessened the importance of the farm laborer and hastened the movement from country to city that began in medieval times. As a consequence, the highly industrialized nations of today have larger city than country populations, and manufacturing establishments have an abundance of labor.

Transportation had its greatest modern development with the introduction and rapid growth of the railroad during the nineteenth century. British and American industry, in particular, are largely indebted to the railroad for the progress they have made. The invention of a satisfactory automobile led to a new era of highway-building in the twentieth century, and hard, durable, well-kept roads have played a major part in building up a huge volume of passenger traffic by private automobile and bus, and freight traffic by motor truck. Indeed, the popularity of motor transportation forms a real threat to the very existence of the railroads. Commercial aviation is increasing in importance, but as yet relatively few passengers and virtually no freight are carried by air.

We are living in an age of iron and steel. Various inventions have

⁶ These and other figures are given in *ibid.*, chap. 11.

improved the quality of iron and steel products, and have greatly lowered their price. The use of steel in shipbuilding, in the construction of bridges and skyscrapers, and in the manufacture of automobiles, locomotives, railway coaches, and labor-saving machinery—to mention but a few of its modern uses—has led to the development of gigantic steel businesses in the great industrial countries. Electricity and petroleum are now used extensively for power, but the steam engine, with coal as its fuel, continues since the Industrial Revolution to turn most of the industrial machinery of the world.

The factory system has moved steadily onward ever since its beginning. Large-scale business, with hundreds of millions of dollars invested in a single company, is now common in many fields of production. The number of employees in a given plant is so great that it is necessary to pay special attention to the *management of men*. As a consequence, scientific management and personnel administration have been developed. Mechanical improvements in manufacture, reducing the amount of labor needed in a given industrial process, have come upon us with a rush—particularly in the third, fourth, and fifth decades of the twentieth century. This situation has led certain observers to express doubt that we shall ever again be able to provide employment for all who want work. Of this and other problems that have resulted from recent economic changes, we shall have more to say later.

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1. What, if anything, has migration to do with the increase of human wants?
 2. "As for food, clothing, and shelter, man is no longer content merely to satisfy hunger and protect himself against the elements." Illustrate.
 3. "Imitation has played a large part in the expansion of wants." How?
 4. What is "conspicuous consumption"? How may it be distinguished from "normal consumption"?
 5. Discuss the desire for leisure, and its possible effect upon production.
 6. When a farmer speaks of an overproduction of wheat or cotton, does he mean that everyone has all the cotton clothing and all the bread that he can use advantageously? If not this, just what does he mean?
 7. It is said that the limitation of goods is attributable to a scarcity of the factors of production. Why is this true?
 8. What are the *primary* factors of production? In what sense are they "primary"?
 9. High-grade land is limited in quantity. What is the economic significance of this fact?
 10. In what respect does a scarcity of labor differ from a scarcity of land?
 11. State the conflict that arises from man's desire for goods and the manner in which goods become available for use.
 12. Describe the medieval manor, with particular emphasis upon (1) the *personnel*, and (2) the *land*.
 13. In what respects was life on the manor "stinted" and "unprogressive"?

14. How do you account for the decline of the medieval manor?
15. Discuss the consequences of the passing of the manor.
16. In what ways did Abraham Darby, James Watt, and Eli Whitney contribute to the Industrial Revolution?
17. Discuss the chief problems of transportation in the eighteenth century, and measures that were taken for their solution.
18. What are the outstanding characteristics of the factory system?
19. In what respects does the manufacture of textiles lend itself readily to the machine process?
20. "The rise of the factory system was not an unmixed blessing." Explain briefly.

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Some Elementary Economic Concepts

EXACTNESS IN THOUGHT AND STATEMENT IS ALWAYS AN AID TO UNDERSTANDING, but it is particularly important in the field of science. It follows that the student of economics will need to know the technical sense in which economists use certain words which are a part of our everyday language. In economics, as in other sciences, the thought that a writer aims to convey through the use of a word may be quite different from that connoted by the word in ordinary usage. For this reason, it is necessary to agree upon what we mean by certain terms when we employ them in economic discussion. Some of these terms will be explained in the present chapter, and others will be dealt with as they occur in the course of specific discussions.

GOODS

We have defined economics as the science that describes man's efforts to satisfy his wants by utilizing the scarce means provided by nature. The broadest term applied by economists to things that are wanted by people, because they are expected to satisfy human wants, is "goods."

Free Goods and Economic Goods. The term "goods" includes all things that are useful. A thing is *useful*—that is, it possesses the quality that economists call "utility"—when it is wanted or desired by human beings. To the economist, then, the word "utility" is synonymous with "wantedness" and "desiredness." Furthermore, a thing is a good—provided it is wanted—even though its consumption may not actually gratify human desires. Little boys have been known to desire green apples, which (because they were wanted) possessed utility and were therefore a good, despite the fact that their consumption brought pain instead of the anticipated pleasure.

There are some goods, such as air, water, and sunshine, over which man often has little or no control, or which are available in relatively unlimited quantities. Goods of this kind are called "free goods." However, few of the goods in an economic society are free. That is to say, while all goods are desired, most goods are also scarce; and when the element of scarcity is added to that of utility the term "economic good" is ap-

plied, provided (as we shall explain presently) ownership in the good can be transferred. Whether goods are free or economic is usually apparent when we know whether or not they command a price. Anything for which we must give something else in exchange is of necessity an economic good. And so all articles which are bought and sold are economic goods. This includes, of course, nearly everything which is transferred from one person to another in our modern society.

Conditions may change in such a way as to convert free goods into economic goods. "When every cottager has a well from which he can draw as much water as he needs, with no more labor than is required at his neighbor's well, the water in the well has no market value. But let a drought set in, so that the shallow wells are exhausted, and even the deeper wells are threatened, then the owners of those wells can exact a charge for every bucket which they allow anyone to draw for his own use."¹ But, drought or no drought, water in a densely populated region ceases to be a free good and becomes an economic good, since great expense is involved in supplying the people of a large city with an adequate supply of pure drinking water. This expense must be borne by someone, or the water will soon cease to be provided, and consequently the users of the water are required to pay for whatever quantity of this good—an economic good, it will be noted—they require. A similar statement may be made about air. Though air is ordinarily thought of as a free good, it is often necessary in great office buildings to provide expensive ventilating systems to insure a steady supply of fresh air, and the cost of this service must be borne by the tenants in the form of higher rents. In air-conditioned railway trains, theaters, stores, hotels, and private homes, this good is no longer on the free list but must be accounted an economic good.

The word "economic" in the term "economic good" is the key to the situation. If we—society as a whole or individual members of society—have to economize in the use of a certain good, then it is obviously an economic good.

So long as goods are free, the question of ownership does not arise, for the ownership of a good has no significance if the good is so abundant that every member of society may have all he wants of it, merely for the taking. But whenever a good is scarce, as it must be to qualify as an economic good, ownership becomes a matter of first importance. We have pointed out that goods may easily be classified as "free" or "economic" if we know whether they command a price. But goods will command a price—that is, they will be economic goods—only if ownership in them can be transferred. To buy a thing obviously means to acquire ownership (or title) in the thing. Hence, the term "economic good" implies not only *utility* and *scarcity*, but *transferability* as well.

Since the science of economics relates only to economic goods, we may

¹ Alfred Marshall, *Principles of Economics*, London, Macmillan & Co., Ltd., 1930, 8th ed., p. 428.

dismiss in a few sentences those things which fall short of being economic goods, by reason of being non-transferable. The skill of a physician is a case in point. Skill of this kind clearly has the characteristics of utility (since it is desired) and of scarcity (since it does not exist in relatively unlimited quantities). But it cannot be transferred—though *services* flowing out of the skill may be transferred—and, as a consequence, it is not an economic good. If skill of this kind *could* be transferred, we should not feel as impoverished as we now do by the loss of a great scientist, statesman, artist, or business man. His work may live long after his death, but his personal skill ceases to exist, since it cannot be transferred to another. In like manner, personal ability of all kinds, natural or acquired, is excluded from the category of economic goods, because it lacks transferability.

Human beings, too, fail to qualify as economic goods (in countries that forbid human slavery) because they are not transferable. So far as utility and scarcity are concerned, they are clearly eligible. And if they lived in societies that permitted human slavery, and were themselves members of the slave class, they would classify as economic goods—and also as wealth, since they have the characteristic of *materiality*, which, as we shall see, is a necessary attribute of wealth. Under slave conditions, then, some human beings have precisely the same economic status as horses, cows, and other domesticated animals. But, in general, they are not economic goods, since society does not ordinarily permit human beings to be owned and as a consequence they are not transferable.

Services

Economic goods are of two main types—"wealth" and "services." The distinction between the two is based upon whether the goods in question are *material* or *non-material*. Economic goods that are material, or concrete, in nature are *wealth*; those that are non-material are *services*. We shall deal first, and briefly, with services.

Services consist of things that possess utility, scarcity, and transferability—but not materiality. When Josef Hofmann gives a concert in Carnegie Hall, or Dr. Chevalier Jackson removes a foreign object from the human body by means of his famous bronchoscope, an economic good is created. Piano concerts and surgical operations unquestionably have utility and scarcity, for they are wanted by human beings and are limited in quantity. They also have the characteristics of transferability, for the music of the pianist passes to the listener and the healing art of the physician to his patient. Perhaps the best evidence that a transfer actually takes place is the willingness of the recipients to pay for these economic goods. Items of this kind are not wealth, because they lack the attribute of materiality, but this does not mean that they play a minor rôle in satisfying human wants.

Indeed, non-material economic goods, or services, may at times be far

more important than material economic goods, or wealth. The doctor who pulls one through a serious illness, the policeman who prevents a robbery or murder, and the lawyer who saves his client from the gallows are performing services so vital that their significance is hard to measure in terms of dollars and cents. Among the producers of non-material economic goods are bootblacks, journalists, barbers, clergymen, soldiers, bankers, teachers, chauffeurs, butlers, actors, and hundreds of other kinds of workers. The products of these workers (who in numbers run into the millions in the United States) are wanted, scarce, and transferable, but they are not material and therefore are not wealth.

Wealth

Wealth plays so large a part in economic life that economics has often been defined as "the science of wealth." Though we have adopted a broader definition, which was stated in Chapter 1, we shall have much to say about wealth in its various forms.

The Material Nature of Wealth. If we could take an instantaneous photograph of all the material economic goods in the United States at a given moment, we should have a picture of the wealth of the country. This picture would include all of the farming land with its fertility; all of the mineral resources, such as iron ore, coal, and petroleum; all of the factories, together with the land they occupy and the machines they house; all of the stores, with their stocks of goods; all of the great transportation lines; and all of the homes and personal belongings of the people of the country. These and all other material economic goods would have to be in the picture.

There are some who hold that the term "wealth" should include non-material as well as material things, and that there should be added to the material goods which we have described all of the abilities, innate and developed, which are to be found in the people of the nation. These abilities, to which we have already referred briefly, are of great variety. The physical ability of the unskilled worker, the manual ability of the trained artisan, the intellectual ability of professional men, the home-making ability of the millions of housewives, and the artistic ability of creative and interpretative artists are of unquestioned importance in the economic life of the country. They constitute an invaluable economic asset. Their utility and scarcity are undeniable; but, by definition, they are not wealth, since they are neither transferable nor material. To include them in wealth would involve many complications and would lead to confusion. Hence, we limit our concept of wealth to things that have utility, scarcity, transferability, and materiality.²

² But, though we exclude non-material economic goods from our concept of wealth, we shall not omit them from consideration. Indeed, services will be discussed in our study of "income" in the present chapter.

A Test for Wealth. From what has been said, it is evident that we may determine whether a thing is wealth or not, simply by answering these four questions:

1. Does it have utility; which means, is it desired by human beings?
2. Is it scarce; which means, is the quantity so limited that it is an economic and not a free good?
3. Can ownership in it be transferred from one person to another?
4. Is it material (or concrete) in nature?

The student should have no difficulty with the concept of wealth if he pays strict attention to the definition and to the four test questions that have been suggested. It may be helpful to bear in mind the fact that, in economic parlance, anything that is desired is a *good*; any good that is scarce and transferable is an *economic good*; and any economic good that is material is *wealth*.

Is Money "Wealth"? A common conception of wealth is that it consists of money, and yet, strangely enough, this is something which it is best not to regard as wealth in most of our economic discussion. Money, as we shall see in some detail later in our study, is desired in the main merely because it facilitates the exchange of economic goods for other kinds of economic goods. It is, therefore, really just a means of making it possible to trade goods more easily than could otherwise be done in our complicated economic relations. Money is almost never desired on its own account; and therefore, though it is scarce, transferable, and material, it may be said to possess almost no utility except that which it has by virtue of its power to facilitate exchange.

Money, however, is of several kinds, the chief divisions being metallic and paper money. The remarks that have been made thus far apply particularly to paper money. Metallic money, of course, may be desired for the metal itself. For example, a gold coin melted into bullion would be distinctly useful, since there are many uses for gold apart from its aid in exchange. To the extent to which money is wanted because of its desirability as bullion, it must be considered wealth. But this means that a silver dollar is not a dollar's worth of wealth, since there is not in it a dollar's worth of silver bullion. In like manner, the Federal Reserve note on which are printed the words "five dollars" cannot be accounted five dollars' worth of wealth. It is, rather, a claim upon that amount of economic goods, including both wealth and non-material goods.

It is best, then, in economic discussion, to regard money not as wealth but as a *claim upon economic goods*, which means that, with a certain amount of money in our possession, we are in a position to demand and secure the things which we really want, and these things ordinarily are concrete goods and personal services.

Further "Claims upon Economic Goods." Other items which may be listed as claims upon economic goods are such things as stocks and bonds,

patent rights, copyrights and "good will." *Stocks* and *bonds* are simply certificates of ownership in certain business organizations, through which the holders are enabled to claim a share in the earnings of these organizations.³ Stocks and bonds usually represent physical equipment in a business establishment of some kind. When a share of stock or a bond is purchased, the buyer gives up a certain amount of money with which the seller of the stock or bond is able to buy physical equipment to aid in the operation of his business. This physical equipment, and not the stocks or bonds, is the real wealth.

Patent rights, copyrights, and good will are intangibles through which the holder expects to secure certain privileges not enjoyed by most persons. A *copyright* or a *patent* grants the holder a monopoly privilege which may bring a large return not enjoyed by others. For example, the patent rights on the Eastman "Kodak" make it possible for the manufacturer to sell this article without fear of competitors producing and selling something precisely like it; and in like manner a copyright protects an author's rights in his literary production, or a business man in the exclusive use of a trade name such as "Pepsi-Cola" or a slogan such as "The hat that makes the headlines." To be sure, there are usually satisfactory substitutes available which keep the monopoly from being a complete one. *Good will* is a sort of prestige which is built up by fair dealing over a period of years, and which, once established, is likely to result in a continuance of trade. Thus some persons have been dealing at the Wanamaker stores for years and, having been satisfied, continue as a matter of course to make their purchases there. Were the Wanamaker management to sell out to another concern, this good will which has been built up could, in part at least, be transferred to the new management and would insure the patronage of some of the former Wanamaker customers.

It may be added that some economists classify as *individual*, but not *social*, wealth such items as we have referred to in the past few paragraphs. A share of Pennsylvania Railroad stock, for example, is said to be wealth to the individual, but not to society. If the right represented by the share of stock were to be destroyed, society would not suffer, but the owner of the share would lose his claim upon that quantity of goods to which his holding of stock now entitles him. This classification is a useful one for some purposes, and serves still further to emphasize the fact that the real wealth consists not of the claims themselves but of the economic goods which they enable the holders of these claims to obtain.

³ Bonds, strictly speaking, do not represent ownership, but are contingent claims which become effective only in the event that the debtor fails to meet certain contractual obligations. The distinction between stocks and bonds will be taken up in detail in a later chapter.

An Analysis of Wealth

In attempting to define wealth, we stated that it consists of a stock of material, economic goods. We may now examine in somewhat greater detail the nature of wealth. Wealth, then, falls into three classifications: Land, capital, and consumers' goods.

Land. *Land* may be defined as natural resources created without the assistance of labor. This includes not only a part of the earth's surface, but rivers and streams of all kinds—though not canals, which are man-made; mineral deposits, such as coal, iron, and oil; agricultural attributes, such as fertility; climatic conditions, including rainfall, sunshine, and temperature; natural vegetation, such as forests and fruits; and wild animal life, such as fish and game. Land is the very basis of man's livelihood. It is the starting point of all economic life. It is, therefore, of the utmost importance that we get a clear notion of what the terms means in its economic usage.

Consumers' Goods. Man, coming upon the scene, takes these natural resources and converts them to his own uses. Some of the goods which nature has bestowed upon him are ready for consumption. There is, for example, the fruit which may be picked from the tree and consumed immediately. But most of nature's bounties are in a crude state until they have been worked upon by man. Man's desire, of course, is to transform these natural resources into consumers' goods, for *consumers' goods* are produced goods in the possession of the persons by whom they will be used in the direct satisfaction of wants. They are ready, therefore, to gratify human desires without passing through any further productive processes. A tree in the virgin forest is, from the point of view of the economist, land. When that tree has been felled, fashioned into a chair, and delivered to one who needs it, it is no longer land but a consumers' good. Likewise, a fish in the sea is land, but cooked and served up to a hungry man it too is a consumers' good. We might, in like manner, name thousands of articles in daily use which had their origin in land and which, through the process that we call "production," have been converted into consumers' goods. But whether they are still in the primitive state known as *land*, or have been graduated to the final stage of their existence where, as *consumers' goods*, they minister directly to the needs of human beings, they fall also, by definition, under the broader heading of *wealth*.

Consumers' goods, it should be noted, are sometimes divided into durable and non-durable goods. *Durable goods* consist of houses, pianos, books, and other things which may be used over a relatively long period of time. *Non-durable goods*, on the other hand, are such things as food, coal, gasoline, and the host of articles which are consumed in a comparatively short time, sometimes with a single use.

Capital. In some cases the process of production is long and elaborate, and involves the use of what is commonly termed "capital." *Capital* is produced goods intended for further production. Man has discovered that goods can be produced more economically if, instead of trying to make the consumers' goods directly from natural resources, or land, he makes intermediate goods which economists call capital. In making a chair we require certain tools—an axe, a saw, and a hammer. Since these three things do not directly gratify human desires, they are not consumers' goods but capital; that is, they are produced goods intended for further production. And since they are capital, they are also wealth.

These are exceedingly simple examples of capital. Our picture of wealth would include many pieces of extremely elaborate machinery which come under this classification of capital. The steam shovel used in excavating, the truck used in transporting goods, the countless machines in metal-working establishments, the printing press in the newspaper plant, the typewriter in the business office—these are but a few of the thousands of kinds of capital that might be listed. All, it will be noted, are goods made by man from natural resources; and all are made not for the sake of the direct gratification of wants, but with the idea of being used in further production. On this account they are sometimes called "producers' goods"; and we shall use the terms "capital" and "producers' goods" interchangeably.

Fixed and Circulating Capital. Classifications in the field of economics are numerous. Capital may be classified in several ways with some advantage. It may be divided first of all on the basis of its *durability*, in which case it is called either *fixed capital* or *circulating capital*. Fixed capital is that which lasts for a long time, which is not consumed in a single process or even a few processes; whereas circulating capital consists of those types of capital which are used up promptly and therefore play but a brief part in the productive process.

A steamship, for example, is fixed capital, and so is a locomotive or a printing press or a typewriter. In all of these cases, the capital may be worked steadily for a number of years before it is rendered useless. But the coal that is consumed in the furnaces of a manufacturing plant, the paper that passes through a printing press and becomes a newspaper, and the electrical power that drives much of our industrial machinery are all only slightly durable; and such items, which are consumed in a single process or in several processes, are commonly called circulating capital.

Free and Specialized Capital. Another classification is sometimes made on the basis of the *number of uses* to which capital may be put. If it has a great many possible uses, it is *free capital*; but if its uses are limited, it is *specialized capital*. One of the best examples of free capital is coal. It can be used in any of a thousand industries, and is therefore said to move freely throughout our industrial world. But a shoe-manufacturing

machine or a metal-cutting machine is designed for a particular industry. It comes under the heading, therefore, of specialized capital. Coal is equally useful in providing power for shoe manufacture or metal working, but the shoemaking machine is worthless in the metal-working plant, and a steel-cutting device is similarly useless in the shoe factory. Of course, there are many degrees of specialization of capital.

It may be helpful to have before us, in outline form, some of the terms that have thus far been discussed in the present chapter. It will be recalled that man's purpose in engaging in economic activity is to secure those goods which, in addition to free goods, are needed for the satisfaction of his wants. Fig. 1 is an outline of "goods" of all kinds.

Goods:

I. Free Goods.

II. Economic Goods:

A. Services.

B. Wealth:

1. Land.

2. Capital:

a. Fixed and circulating.

b. Free and specialized.

3. Consumers' Goods:

a. Durable.

b. Non-durable.

FIG. 1. AN OUTLINE OF "GOODS"

INCOME

Wealth is a *stock* of material, economic goods, thought of as existing at a *given moment of time*. Income is very closely related to wealth, inasmuch as it may be described as a *flow* of economic goods *over a period of time*. The distinction in the time element entering into these two concepts should be noted carefully, and it should also be observed that, by definition, services are excluded from wealth but are included in income. A workingman's wealth, then, could be calculated by making an inventory of all his worldly possessions at any moment of time. The list would include, of course, only the material goods to which he holds title. His income could be arrived at by listing all of the economic goods, non-material as well as material, that have come into his possession during a given period of time, say a week, a month, or a year. Either list might include such concrete items as a piano, a suit of clothes, a book, or a loaf of bread; but only the second list—the list representing income—could include services, such as a boat ride, the extraction of a tooth, or a motion picture performance.

The wealth of the United States includes all of the material, economic

goods that belong to the people of this country. The value of this wealth, in the year 1940, was estimated at roughly \$300,000,000,000. Farm land, mineral resources, factory buildings with their equipment, stores with stocks of merchandise, railway and motor lines, public works and private homes, and personal effects of all kinds helped to make up this enormous stock of wealth.

The Flow of Income. A nation's stock of wealth, then, consists of all its material possessions at any one time. Though it includes finished goods that are ready to be consumed, it is made up chiefly of land, factory buildings, and machinery, which are being used continually by labor of many kinds in the production of still more finished goods or of more factories and machinery. Thus, flowing from this stock of wealth over a period of time, say during the course of a year, are large quantities of material and non-material goods which minister, directly and indirectly, to our comfort and enjoyment, and which the economist calls income. If we accept the estimate that this flow of material and non-material economic goods was worth \$75,000,000,000 in 1940, we have some notion of the relationship between the wealth and income of the United States in that year.⁴

However, not all of the national income is consumed during the year. What actually happens in the United States is that something like 85 per cent of this income is used up annually, and about 15 per cent takes the form of machines and other productive instruments, and *durable* consumers' goods, instead of being consumed immediately. Thus every year witnesses an increase in the quantity of wealth in the United States, and we find that perhaps some \$12,000,000,000 worth of material goods was added to our stock of wealth during the year 1940. We shall later investigate, in some detail, the way in which the wealth of the country is built up through savings from income.

Changes in Wealth and Income. Individual wealth and income, and national wealth and income, are sometimes large and sometimes small, since they reflect as a rule the degree of prosperity which the individual or the nation is enjoying. Prolonged business depressions interfere seriously with the satisfaction of human wants because they usually lessen and sometimes destroy entirely the individual or family *income* which makes economic goods obtainable. But individual *wealth* also varies. When the wheels of industry slow down or stop turning altogether, those to whom slack work or total unemployment comes are often compelled to live upon wealth instead of income. And if unemployment is very long drawn out, there will be in the families affected but little if any replace-

⁴Comparable estimates for the boom year of 1929 were: Wealth, \$360,000,000,000; income, \$90,000,000,000. We have avoided, in this chapter, the use of wartime and post-war data on national wealth and income, giving instead pre-war figures which may be supposed to be more nearly normal than the inflated data of 1941-47.

ment of worn-out clothing and house furnishings. Even wealth of a more permanent nature may be impaired or destroyed. It is notorious that housing deteriorates speedily in time of depression—peeling paint and leaking roofs are neglected, broken windows and faulty plumbing go unheeded; to cite a striking illustration from the post-1929 depression—a period of tragically widespread unemployment—thousands of tenants have been known to tear out the inside woodwork of their homes and burn it in the absence of other fuel. Factory buildings and other kinds of industrial equipment also go to rack and ruin when business comes to a standstill, for it is often impossible for the enterprisers to borrow the funds needed for repairs, and in any case it seems to some people like sending good money after bad to invest further in a business that gives no promise of paying dividends for many years to come, if indeed at all. Governments, too, in the face of reduced revenues, sometimes allow roads, buildings, and other government property to fall into decay, and thus decrease the total wealth of a country.

However, a decrease in wealth is sometimes less extensive than it seems to be, as may be seen by comparing estimates of wealth in this country in 1929 (a year of great prosperity) and 1934 (one of the worst years of the greatest of depressions). The total wealth of the United States was estimated, in 1934, at \$180,000,000,000, and a comparison with the estimated \$360,000,000,000 of wealth in 1929 might seem to indicate that 50 per cent of the country's wealth had disappeared during this five-year period. But figures are sometimes deceptive; a large part of this apparent loss was merely a decline in the *value of wealth* and not a loss of wealth itself. For reasons which we shall later study at some length, the prices of nearly all kinds of goods decline during business depressions. Much real estate, for example, lost fully half of its value in the course of a year or two during the period that we are considering. This drop in value was unquestionably a serious matter to the individual who owned a piece of property and wanted to dispose of it, for it probably meant selling for much less than the property had cost. But to society as a whole a loss of this kind has little significance. If the property was in as good condition in 1934 as in 1929, its usefulness to society was just as great, despite the fact that its value had been halved. A dwelling that has not deteriorated physically provides quite as much shelter when its value is \$10,000 as when it would have brought \$20,000 on the market. An acre of land that produced forty bushels of wheat fed just as many mouths in the depression year of 1934 as in the boom year of 1929, even though its value declined from \$50 to \$25. And if an owner of property was forced to sell at deflated prices, then what was "hard luck" for him was "good luck" for the buyer, and, from the point of view of society as a whole, the gain of one canceled the loss of the other. Consequently, while we must count as a loss in both individual and social wealth whatever reduction depression brings in the

quantity and quality of the country's stock of material goods, we may console ourselves somewhat with the knowledge that, when expressed in terms of value, the loss appears to be much larger than in reality it is.

In like manner, a reduction in national income from \$90,000,000,000 in 1929 to \$45,000,000,000 in 1934 did not mean that the people of the United States had only half as much income in the way of economic goods—commodities and services—in the latter year as in the former. For the reduced money income of 1934 would have bought considerably more than half as much economic goods as the larger money income of 1929, for the reason that there was a decline in general prices during these years. Of this sort of thing we shall have much to say in later chapters, but we may add at this point, by way of comparison, that the national income of the United States in 1934, when translated into commodities and services, was approximately 70 per cent as great as the national income of 1929.

It is equally true, of course, that the seemingly enormous increase in both national income and national wealth which took place between 1934 and the artificially stimulated war year of 1944 was not so huge an increase in *prosperity* as the figures might suggest at first sight, for the reason that prices rose greatly during this period and also because the goods represented by these figures were, to a large extent, instruments of destruction instead of goods calculated to satisfy normal human needs.

Money Income, Real Income, Psychic Income. The term "income" requires a little further analysis. Economists commonly speak of three kinds of income. These are money income, real income, and psychic income. *Money income* is readily understood. In this country it consists of the dollars that a person receives over a period of time. *Real income* is not money, but the commodities and services which one is able to buy with his money income. The distinction between money income and real income is quite important, since there is much confusion in the mind of the average person on this subject. A large money income does not necessarily mean the ability to buy much economic goods, for if prices are high a money income, even though large, will purchase relatively few of these desirable items. Nor does a reduction in money income necessarily mean a corresponding reduction in real income, as we noted in the preceding paragraph. If, then, we are speaking of a person's income and wish to refer to the standard of living he is able to maintain with that income, what we have in mind is real and not money income. This is but another illustration of the fact that money in itself is of little use, and attains significance only as it procures for us the things we want.

The third type of income, *psychic income*, has relatively slight importance for the student of economics. It is not susceptible of scientific treatment. Psychic income means the actual enjoyment or gratification which comes to a person through the consumption of commodities and services. The pleasing taste of food on the palate and the sense of elevation which

comes through hearing fine music are examples of psychic income. Inasmuch as the amount of enjoyment contributed by economic goods differs with the make-up and temperament of the individual consumers, there is no way of measuring psychic income; and it is mentioned only to make clear the fact that the satisfaction of human wants by means of commodities and services is, after all, the goal of all productive processes.

Individual Gross and Net Income. One further classification of income may be made. When a business man mentions his total receipts for a given period, say a year, he is referring to *gross income*. But when he deducts from this amount all of the expenses incurred in connection with the conduct of his business, what is left constitutes *net income*. For many purposes this deduction is essential. If, for example, a small shopkeeper wishes to ascertain how well he is being paid for conducting his business, he must subtract from his gross income not only all money he has expended, but also a payment for any land, labor, and capital *of his own* that he has used in the enterprise; only then will he know how great a net income he is reaping from the operation of his business.

A *good* is anything which is desired by human beings.

Free goods are goods which are so plentiful that they do not command a price.

Economic goods are transferable goods which exist in such limited quantities that they command a price.

Land is natural resources created without the assistance of labor.

Capital (or *producers' goods*) is produced goods intended for further production.

Consumers' goods are produced goods in the possession of the persons by whom they will be used in the direct satisfaction of wants.

Wealth is a stock of material, economic goods.

Income is a flow of economic goods over a period of time.

1. Define "goods," "free goods," "economic goods," "wealth," "income," "land," "capital," "consumers' goods."
2. When, in an economic sense, does a thing possess each of the following characteristics?
 - a. Utility.
 - b. Scarcity.
 - c. Transferability.
 - d. Materiality.
3. Give several examples of "free goods."
4. How is an increase in population likely to affect the "free goods" of a community? Illustrate.
5. Distinguish carefully between "material" and "non-material" economic goods.

6. Distinguish between "wealth" and "services."
7. By what test may one determine whether or not an economic good is "wealth"?
8. Are human beings "wealth"? Explain.
9. "The true wealth of a nation is the abilities of its people." Comment.
10. To what extent is money "wealth"? On what ground do we exclude it from this category?
11. What is "good will"? Why is it not regarded as "wealth"?
12. Distinguish between "individual wealth" and "social wealth."
13. Into what three classifications may "wealth" be divided?
14. How does the economist's use of the term "land" differ from the everyday use of this word?
15. In what manner is "land" converted into "consumers' goods"?
16. Name at least five articles that may properly be classified as "capital," and explain why they may be so classified.
17. What attribute of capital is under consideration when the terms "fixed capital" and "circulating capital" are used?
18. What characteristic of capital is emphasized in the use of the terms "free capital" and "specialized capital"?
19. Illustrate the fact that the ownership of specialized capital may involve greater risk of loss than the ownership of free capital.
20. Study carefully the outline of "goods" given in Fig. 1.
21. Distinguish between "wealth" and "income."
22. What was the value of the wealth of the United States in 1929 and 1934, respectively? The value of the income of the United States in those years?
23. What is the percentage of the yearly "non-consumed income" of the United States? What happens to this income?
24. How do you account for the fact that there was a decline in the wealth of the country between 1929 and 1934?
25. Distinguish between *a loss of wealth* and *a loss in the value of wealth*. Which of the two affects more seriously the prosperity of a country?
26. Define "money income," "real income," and "psychic income."
27. Distinguish between the money income and the real income of the United States for the years 1929 and 1934, respectively.
28. What are "gross income" and "net income"?

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Basic Institutions of Capitalism

AN INSTITUTION, ACCORDING TO WEBSTER, IS "ANYTHING FORMING A characteristic and persistent feature in social or national life or habits." An examination of the economic life of a highly industrialized country, such as the United States, reveals the existence of a number of institutions which may be regarded as fundamental to the operation of the capitalistic system. In some cases they are the incentives that induce men to engage in arduous tasks; and, again, they are certain rules or principles according to which the economic game is played. We shall describe briefly several institutions which appear to be basic characteristics of capitalism.

SELF-INTEREST

The Meaning of Self-Interest. The principle of self-interest has a prominent place in every society. *Self-interest is a higher regard for one's own welfare than for the welfare of others.* It means, in short, "every man for himself and the devil take the hindmost." The Biblical injunction to do things "in honor preferring one another" is not very generally heeded in actual practice. In war, in politics, in religion, in law, in "high society," in teaching—indeed, in almost every field of human activity—are evidences of the desire to get ahead even at the expense of others. The self-denying person is the exception rather than the rule.

Self-Interest in Economic Life. It is in the arena of economic struggle that the principle of self-interest has widest expression. Adam Smith emphasized, as a strong motive to economic activity, "the natural effort of every individual to better his own condition"; and it is easy to find examples of self-interest manifesting itself in the exercise of the acquisitive instinct, which is the urge to get for oneself those economic goods which seem likely to contribute to one's enjoyment. Since economic life concerns itself wholly with things that are scarce—that is, with commodities and services that are desired by many but are not sufficiently plentiful to constitute free goods—it often happens that, in seeking one's economic self-interest, one deprives another of goods which that person is anxious to secure.

The principle of self-interest is in thoroughly good repute in the economic world, provided only that in practicing it one acts in conformity

with certain established rules and regulations. The acquisition of wealth by theft or robbery is outlawed; but it cannot be denied that some business men have become rich through charging extortionate prices for scarce, necessary goods, and have even themselves (through monopoly control) brought about the scarcity by artificial means. Workmen likewise have not hesitated to charge as much for their services as they have been able to force from their employers; and sometimes these high wages have been won through the agency of a "closed union," which is, again, a form of monopoly control.

The "Economic Man." Recognition of the significance of self-interest as an economic motive gave rise to the concept of the "economic man," who might be described as a mythical creature in whom the acquisitive instinct has been grossly over-developed, and the other forces that commonly influence human conduct have shriveled up and disappeared. The economic man, as he has sometimes been pictured, is an individual who in all his actions carefully calculates the economic consequences of this move or that, trying always to add to his possessions. His course of action may be described briefly as selling at the highest possible prices and buying at the lowest possible prices. In making his purchases he aims always to secure the maximum of satisfaction; that is, he never spends a dollar for any commodity or service if the expenditure of this amount for something else would bring him greater satisfaction. He does his best, also, to avoid dissatisfaction. If, for example, our economic man is a workman to whom either of two jobs is open, he will be expected without question to choose the one which, for each dollar of income, entails the least work, since long-continued work is irksome and therefore productive of dissatisfaction.

Objections to the Concept. Many pages of print have been used to prove that the economic man does not exist. The objectors, in some cases at least, have seemed to have in mind an economic man who not only sought, but actually attained, the maximum of satisfaction and the minimum of dissatisfaction in all of his dealings. Thus defined, the economic man is certainly imaginary, for there are so many obstacles in the way of attaining this ideal that one may safely say that it is unattainable by mortal man. To make the choices necessary to complete success would require infallibility of judgment.

Whether it is better to pay the neighborhood druggist a quarter for a tube of shaving cream, or walk a dozen blocks and get it for 17 cents at a cut-rate store, is perhaps a small matter; but thousands of such questions would have to be answered by the economic man in the course of a year, and every question would involve the knowledge of many facts, and a balancing of each against the others, before a decision could be reached. It is unbelievable that in these thousands of judgments the maximum of satisfaction and minimum of dissatisfaction would always be realized. How—to indicate but one difficulty—could the economic man

gain full knowledge of all necessary details without consulting the advertisements? But how, after reading the advertising blurbs of competing producers, could he attain the maximum of satisfaction in the purchase of (say) an automobile, a radio set, or a package of cigarettes, unless he possessed the wisdom of a Solomon!

Modifications of Economic Self-Interest. We may abandon, then, as beyond the bounds of reason, the concept of a person who actually attains the maximum of satisfaction and the minimum of dissatisfaction in all of his economic dealings. And even if we picture the economic man as one who merely *seeks* always to further his economic self-interest, it seems probable that we shall have difficulty in locating him. For there are few persons, if any, who value material things above all else. Not only do men often fail to achieve economic self-interest to the fullest, but they even appear sometimes deliberately to perform uneconomic acts. Thus, people continue to patronize the corner grocer though a new chain store sells more cheaply; one buys from a friend on terms somewhat less favorable than those offered by a stranger; and a prominent industrialist gives up a \$350,000 job to accept a government post at a dollar a year.

Self-interest, then, while probably the strongest motive back of economic activity, is not the only one; nor is self-interest equally strong in all individuals. There is such a thing as working at a job, not primarily for the sake of financial return, nor yet because it carries with it great honor or distinction, but because the work in and of itself is interesting or appears to be socially worth while. Quite often several motives—selfish, or altruistic, or both—apparently combine to bring about a given course of economic action. "One person may compete against another for a position because he covets it, not for the sake of money, of which he may have as much as he wants, nor for the sake of power, for which he may not care, but in order that he may play the part which rightly or wrongly he esteems himself fitted to play. . . . People choose their work with some feeling of its value in the world, and perhaps with a half-heroic intention of making it more valuable, but at the same time they look forward to advancing their material interests—which include the interests of families and possibly of friends."¹

Of course, there are certain family relationships into which economic self-interest does not enter, or in which its practice is at least greatly softened. A parent may prefer wealth and fame for a child rather than for himself or herself. A child may deny himself something he greatly desires in order to contribute to the support of a needy father or mother. But these evidences of self-sacrifice do not ordinarily extend beyond a limited circle. Indeed, a man's desire to look after the needs of those near and dear to him may be the very incentive for the adoption of grasping

¹ Sydney Chapman, *Outlines of Political Economy*, London, Longmans, Green and Company, 1923, p. 150.

methods when dealing with those outside his immediate family group. It is not uncommon for a man to compete fiercely with those working in the same field, not because he desires wealth for himself but because he wants his wife and children to be amply provided for.

Whether the goal is immediate personal self-interest, or a limited self-interest that denies one's own self in matters affecting relatives or friends, the effect upon economic society is largely the same. That is to say, there is, with some exceptions, a tendency on the part of all engaged in economic activity to struggle or compete with one another in the effort to draw, each in his own direction, as large a part of the national income as possible. Hence, while denying the existence of a creature who, economically speaking, "as a roaring lion, walketh about, seeking whom he may devour," it seems reasonable to believe that the bulk of the economic acts that are observable on every hand are in fairly strict accord with the principle of economic self-interest.

A well-established economic theory states that the intelligent monopolist does his best to secure the greatest possible total net return. So also does the intelligent business man who operates under competitive conditions. To this end he buys his materials, power, and labor at the lowest possible prices, and sells the finished goods for the most they will bring. If, as often happens, he keeps the *unit* price low, it is with the hope of selling large quantities of the product and thus realizing the maximum *net* profit. The tendency to buy at a low and sell at a high price is well-nigh universal. Few people are so well-to-do that they buy without regard to price; the popularity of "bargain sales" is evidence of this fact. And the laborer, artisan, or manager, in selling his services, seeks ordinarily to get as high a wage or salary as can be had, as is proved whenever strikes are called to force wage increases. In the buying and selling of both commodities and services, then, economic motives are readily discernible.

Self-Interest and Economic Progress. This principle of self-interest has played an important part in economic progress. It has been discovered that one may achieve importance not only by performing deeds of valor or creating works of art, but by accumulating great fortunes. Hence, in addition to desiring material goods and services for the sake of the gratification they provide, men have long sought to amass wealth so that it might win for them the admiration of their fellow men. To acquire the riches that bring prestige, business men labor long and diligently, launch forth into new fields of economic activity, search for improved methods to make their businesses more productive, and in other ways contribute to economic advance. Self-interest may also, of course, lead to gross injustice, as in the exploitation of the natives of "backward" countries by the business men of more "advanced" countries, who, in their greed for oil, rubber, and other raw materials, have sometimes been brutal in their dealings with native labor.

PRIVATE PROPERTY

But the mere acquisition of economic goods does not fully satisfy the demands of self-interest. Most persons want to hold fast to the economic goods they acquire, or at least to retain complete control over them until such time as these goods may be used up or disposed of in other ways.

Private Property and Its Limitations. Consequently, there has grown up, over a long period of years, the institution of private property. *Private property is the exclusive right of a person to control an economic good.* It guarantees to an individual the right to use and control such goods as he may acquire, without interference from others, and even to dictate how his possessions shall be distributed after his death. There are, to be sure, some restrictions upon the uses to which one's goods may be put, but these restrictions, as a rule, are not particularly burdensome.

Usually there are prohibitions against the use of goods in ways that would be likely to interfere with the rights of other persons. If, for example, a man should choose to destroy his own house by setting fire to it, this privilege would be denied him by the state if his action were likely to endanger the lives or goods of others. Moreover, it is customary for the state (or other political unit) to exact from a property owner, in the form of a tax, some part of his goods (or income from the goods) to meet the expenses of government.

The Protection of Property Rights. However, in an industrialized and relatively democratic country, there is almost always a strong tendency to safeguard carefully the rights of property. Not only is an owner authorized to protect his possessions himself, but society as a whole, through its police power, undertakes to guarantee that he shall not be deprived of his goods by force. And the government itself is forbidden to appropriate private property except by "due process of law."

The institution of private property protects those who *have* against possible encroachments of those who *have not*. Were it not for this protection, self-interest, in the field of economic endeavor, would probably express itself in a struggle for the things that afford *immediate enjoyment* in consumption, for there would be little or no point to devoting time and effort to the acquisition of goods which might be wrested from one by a stronger individual or by a greedy government.

Usefulness of the Institution of Private Property. Indeed, economic progress was hampered for a long time because of fear lest a man should not be permitted to reap where he had sown. Agriculture, the earliest of permanently located industries, did not come into its own until there was reasonable assurance that a man's crops, when they had matured, would not be appropriated by others through force of arms. Manufacturing and commerce likewise have lagged behind in times and countries that have

failed to provide, by means of a strong, well-established government, a guaranty that the rights of property would be respected.

The institution of private property, in making this guaranty, encourages the accumulation of surplus goods and thus aids in the development of an industrial order, for through goods being saved instead of consumed a stock of capital is built up. This capital takes the form of buildings, machines, tools, and other aids to production; and, as we shall see in the next chapter, the effectiveness of production is in large measure dependent upon the existence of instrumental "capital" of these kinds. Since capital is essential to efficient production but will be accumulated only if the owner is protected in his use and control of it, the institution of private property, by providing the necessary protection, makes an important contribution to social welfare.

FREE ENTERPRISE

Private property supplies an incentive to economic activity, and free enterprise keeps open the road to economic opportunity. *Free enterprise is the right of a person "to make what things he likes, and as he likes," or to enter any trade or profession.* This right, if it functions properly, makes it possible for a person to engage in whatever economic activity he may choose, without interference from the state or from individuals. Self-interest, then, impels a man to look about until he finds a line of work which strikes him as profitable; the institution of free enterprise permits him to enter the field he has selected; and the institution of private property insures that he shall be allowed to enjoy the fruits of his ability and industry.

The Beginnings of Free Enterprise. Prior to the Industrial Revolution, a man had but little choice in the matter of his occupation. Under the manorial system, the vast majority of workers were farm laborers who were, in a very real sense, tied to the soil. Being born on a particular manor, they were obligated in various ways to the lord of the manor, and were not free to sever this relationship at will. Their obligations were well established by custom, and ordinarily a son would fall heir to the status—frequently a very humble status—of his father.

Even had the workers been free to come and go at their own pleasure, there were, in those early days of industry, but few distinct trades or businesses which a man might enter; and those few were guarded jealously by organizations of craftsmen and merchants who were then, as now, anxious to avoid undue competition. The introduction of the factory system of manufacture weakened the ties that had bound the peasant to the land, and the demand for factory operatives opened up new occupational possibilities that have been broadening ever since. Thus the control of the individual's economic activity by custom or law gave way to a substantial degree of freedom of individual enterprise.

Government Restrictions upon Free Enterprise. The transformation was not a sudden one, but has stretched out over the years. Even as recently as the early days of the nineteenth century the rights of labor had but scant recognition. There is a recorded case, for instance, of employees who were ordered by the courts to work for their employers at a specified wage and were penalized for failure to comply with the order. Here, obviously, was a violation of free enterprise.

Today the law does not presume to interfere in such matters, though even now there are certain requirements to be met before a person is permitted to enter some professions, notably law and medicine. Plumbers, electricians, and other skilled artisans are likewise required, in some states, to pass examinations in order to secure licenses permitting them to ply their trades. Ostensibly these measures are adopted to protect the public in the purchase of important services which, in the absence of regulations, might be performed badly by poorly trained practitioners. But these are the very grounds on which the medieval guilds sought to justify *their* restrictive measures.

It should be said, in justice to those who champion present-day restrictions upon free enterprise, that exclusions are usually made on the basis of the failure of candidates to measure up to certain established requirements. This means that, while it is deemed unsafe to admit into some fields of economic activity any person who cannot pass the necessary tests, the door is open to all who possess the requisite ability. This is quite a different matter from forbidding the rank and file to leave the economic station in life to which they have been assigned through accident of birth. Under the medieval system the peasant boy was destined to remain a peasant. In a régime of free enterprise, despite the restrictions that have developed, he might reach a position of eminence in the business world or in one of the learned professions.

If we were to call the roll of men of prominence in this country today, we should doubtless find that a large percentage, and possibly a clear majority, had risen from the ranks to their present places of wealth and power. This is particularly true in the business world, for our Carnegies, Rockefellers, Schwabs, Wanamakers, Fords, and other industrial leaders have, probably more often than not, emerged from almost total obscurity and, under the institution of free enterprise, have pushed forward to positions of economic greatness. Such careers would be out of the question in a country which denied its citizens the privilege of choosing freely their avenues of economic activity.

Natural Limitations to Economic Success. It is scarcely necessary to deal at length with governmental obstacles to free enterprise, such as are created through the granting of franchises, patents, and copyrights. These, indeed, may quite properly be regarded as incentives rather than hindrances to economic progress. A franchise is awarded presumably to the

individual or concern that seems most likely to render the best service at the lowest price; and patents and copyrights are, in effect, prizes offered by society to those who invent useful appliances or originate clever ideas. Here, again, the road to opportunity is open to all who can qualify, and not merely to a selected few.

The question of natural ability is one of great significance, of course, and the lack of special talent essential to success in a particular occupation is nowadays more likely than government interference to be the obstacle to freedom of enterprise. Unfortunately for the handicapped and possibly for society as a whole, deficiencies in natural ability are difficult and oft-times impossible to overcome. However, the institution of free enterprise does not pretend to insure success in an economic undertaking. All it does is to say, in effect: "The field is open to you and to all who care to enter the contest. Your success or failure will depend upon your ability to compete with others who, like you, are seeking their economic self-interest."

Free Enterprise and Equality of Opportunity. Our much discussed "equality of opportunity," therefore, means merely that whoever will may enter the lists, but each must supply his own equipment. This equipment, in the economic struggle, consists not only of natural endowments, such as physical stamina, mental agility, sound judgment, and so on, but of capital, or instruments of production, as well. (We are referring, for the moment, to those who aspire to play the enterpriser's rôle.) Of course, if one possesses the essential personal qualities to an unusual degree, he *may* be able to borrow the funds needed to put him on a par with those whose capital is supplied through family connections. But then, again, he may not.

It is apparent, therefore, that genuine equality of economic opportunity does not exist. It is impossible of attainment so long as the instrumental factor of production, capital, is unevenly divided among the contestants. It is impossible, again, so long as the training needed is expensive, and therefore out of the question for some who wish to compete. And even if these artificial barriers were removed, there would still remain the natural barrier of differences in personal abilities to prevent the competitors from starting out on a strict basis of equality. Whether equality of economic opportunity is desirable need not occupy our attention at this time. The point made here is that free enterprise, which many appear to regard as synonymous with equality of opportunity, in reality does nothing more than to open the contest to "all comers," some well equipped and others but poorly equipped for the struggle.

FREEDOM OF CONTRACT

Freedom of contract is a basic assumption of a capitalistic economy. *A contract is an agreement of economic significance which is enforceable*

by public authority.² It is "a two-sided act, expressive of agreement," and involves an offer and an acceptance.³ It must be entered into without force or undue influence, and "the matter agreed upon must be both possible and legal and . . . not contrary to the public policy."⁴

The Prevalence of Contracts. Since contracts arise whenever offers are made and accepted, the institution of contract touches, directly or indirectly, the life of everyone. Owners sell houses, and landlords lease apartments; housewives buy furnishings, clothing, and food; people with dependents take out insurance; those who need ready money borrow from banks or finance companies; dramatic stars accept parts in plays; tourists book passage on ocean liners; and each of these many thousands of transactions constitutes a contract—which may be written, verbal, or implied—because each involves an offer and an acceptance.

Free enterprise and freedom of contract are closely related. Indeed, free enterprise would have little meaning if people were not free to enter into contracts. The institution of free enterprise says, in effect, that the owner of land, labor, or surplus funds may (within reasonable limits) use these agents of production as he likes, in his endeavor to gain economic success. He may decide to lease his land, lend his funds, and hire his services to others. On the other hand, if he chooses to be an enterpriser he may require the use of land, labor, and funds which belong to other members of society. In either case, there must be understandings as to rates of rent, wages, and interest, and the periods of time over which the arrangements he makes are to hold. And if he is to function as an enterpriser, he must be free to sell his commodities or services to would-be buyers.

Enforcement of Contracts. With countless deals of these and other kinds being made daily, it is highly desirable not only that the terms of the agreements be clearly understood, but that they be enforced by a disinterested agency. This agency is the state, operating through the courts. The courts recognize the provisions of contracts as legal obligations, and undertake to enforce them.

It is sometimes argued that labor contracts are not enforceable against wage earners. In theory, such contracts are enforceable, but in practice the courts do not attempt to enforce the actual performance of specific personal services. However (in addition to the willingness of many workers to live up to their obligations), the pressure of public opinion, in the case of labor unions, and the possibility of court injunctions, suits for damages, or other penalties, in the case of especially important workers, serve to reduce the number of violations of labor agreements. It should, perhaps, be added that the weight of public opinion plays a part in the

² Richard T. Ely, *Property and Contract*, New York, The Macmillan Company, 1914, p. 562.

³ *Ibid.*, p. 567.

⁴ *Ibid.*, p. 569.

enforcement of contracts of all kinds, and not merely those which, like labor contracts, are difficult to enforce at law.

The contract "not only unites the present and the future, but the past, present, and the future. The continuity of our economic life demands security and stability. We have only to think of what contract relations are, to realize this—barter, sale, credit, letting, loans, services, deposits, domestic services, agency, partnership, professional services. . . . We see, then, the vast economic significance of contract. Our economic relations are based largely on contract, and in its absence might would prevail. It is very largely through contract that our wealth is accumulated and our share of the national dividend comes to us."⁵

COMPETITION

When we come to the study of value, we shall employ the word "competition" in a strictly technical sense. But in our present discussion we have in mind the more common, dictionary definition of the term, which usually runs about as follows: *Competition is the act of striving for something that is sought by another at the same time.*

The efforts of men to advance themselves economically are shown in their competition with one another. Competition is one of the most pervasive of all economic forces, and is found in all fields of economic endeavor. It is, indeed, the basis of most economic theory; for the science of economics assumes the existence of competition for the most part, and in its absence some of our leading economic laws would be meaningless.

Social Value of Competition. Competition acts as a sort of regulatory force over the actions of men in their attempts to make economic headway. Self-interest may prompt a man to charge an extremely high price for whatever he has to sell, whether commodities or services; but the existence of competition forces him to modify his charge, and the consumer benefits accordingly.

Under competitive conditions, the sellers of economic goods, in their endeavor to secure trade, bid against each other and thus force the price down. For there is always present the fear that if too high a price is maintained, the commodity or service will go unsold. In like manner, self-interest may suggest to a buyer that he offer an exceedingly low price for something he desires, but the competitive bids of many buyers have the effect of forcing the price up. Through the operation of these two forces of competition, one tending to lower and the other to raise prices, a balance is finally reached.

Prices thus arrived at (as we shall note in detail in our study of value) tend to be, in the long run, just high enough to cover costs of production; that is, they tend to be just sufficient to enable the business man to pay

⁵ *Ibid.*, pp. 578, 579.

all necessary expenses, including a salary for his own productive effort. If the term "fair price" is ever permissible, it is surely in connection with a price of this kind, for the efficient business man is certainly entitled to a price that will enable him to meet all legitimate expenses of production; but it may well be argued that society should not permit him to have more.

Competition in Selling. We have already seen that there is competition among sellers who are anxious to dispose of their wares at the highest prices obtainable, and competition among buyers who are desirous of securing these goods, but at the lowest possible prices. These two groups are susceptible of further analysis. Competition among sellers, for example, may relate to *like*, *substitute*, or *unlike goods*.⁶

The type of competition among sellers that is most easily recognized is that which takes place among those dealing in *like* goods. Thus the General Motors Corporation, with Chevrolet cars to sell, competes sharply with the Ford Company offering the Ford "V-8" and with the Chrysler organization selling the "Plymouth." Those who have watched this particular example of marketing have noted a type of severe competition that is present, also, in the sale of clothing, ice cream, bread, and countless other commodities.

Competition among sellers of *substitutes* may be equally keen. Old-fashioned ice refrigerators and modern mechanical refrigerators perform the same general function, that of producing and maintaining a low temperature which aids in the preservation of food. To combat the substitution of the newer device for the orthodox refrigerator, the manufacturers of ice have spent much money on campaigns of advertising. The sale of oil-burning and gas-burning furnaces likewise constitutes a threat against an established business—the anthracite coal industry. The coal dealers have attempted to meet the challenge with advertisements that set forth the advantages of coal, and the disadvantages of oil and gas. So much for competition among sellers of substitute goods, which include items of food, clothing, shelter, transportation, entertainment, and so on.

The desire to dispose of *unlike* goods also results in competition. Since the average person cannot afford to buy everything he might like to possess, he is often obliged to choose from several possibilities the one which appears likely to bring the greatest satisfaction. He may be able to finance a new automobile or a summer cruise, but not both. Consequently, automobile dealers vie with steamship companies, each side seeking to emphasize the superiority of the commodity or service it has to offer. A long list of possible conflicts among sellers of unlike goods might be drawn up. One of the most striking examples of competition of this kind was that which developed some years ago between sellers of cigarettes and sellers of candy. It is likely that few suspected the possibilities of con-

⁶ This useful classification is borrowed from Raymond T. Bye, *Principles of Economics*, New York, F. S. Crofts & Co., 1941, pp. 50, 51.

flict in this connection until a leading tobacco concern began to urge the public to use cigarettes instead of sweets, and the manufacturers of candy retaliated by advertising the real or imaginary evils of cigarette smoking.

Competition in Buying. In buying, as in selling, competition is a force to be reckoned with. Probably nowhere is competition among buyers seen more clearly than at a public auction, with its strictly limited supply of a given commodity (consisting sometimes of but a single unit) and a number of would-be purchasers. A situation of this kind frequently results in very spirited bidding, with the price going up and up until finally the prize is carried off by the highest bidder.

The effects of competitive bidding are most clearly apparent in a case such as we have described, where there is a limited supply; but, in a less spectacular way, the same sort of process is followed whenever goods are bought and sold. For all economic goods are, by definition, both desired and scarce. If the good in question is very scarce, the bidding by buyers will be brisk and there will be a "seller's market," that is, one in which the seller holds the advantage. If, on the other hand, a relatively large quantity of the good is available, there will be a "buyer's market," with prospective purchasers unconcerned and even indifferent, since they feel that they will surely be able to obtain as much as they require. But the competition between buyers, whether brisk or dull, has the effect of raising prices to a greater or lesser degree, just as the competition between sellers tends to bring prices down.

Competition for the Agents of Production. Manufacturers and other enterprisers compete not only for the patronage of consumers, but for the agents of production as well. Thus there is a continuous demand for land, labor, and capital, which may be desired by business men in similar industries or in businesses that are widely different, since enterprisers in all fields require land, labor, and capital; and as they bid against one another for the use of these agents the prices that they must pay (in the form of rent, wages, and interest) are forced up.

But the owners of the agents are anxious to keep them employed and, rather than have the agents idle, they may, by a process of underbidding, force down the prices of these factors of production. Here again, as in the actual sale of goods, competition among buyers tends to send the price up and competition among sellers tends to drive it down. As we have already explained, the price that is finally paid is the result of an adjustment between these two tendencies.

Interference with Competition. Competition, like self-interest, is found in all walks of life, but seldom in the pure, undiluted state. We noted, in discussing the economic man, that however diligent one may be in seeking his self-interest, the limitations of human knowledge and action render complete success improbable, if not impossible.

Similarly, a lack of knowledge of conditions and circumstances beyond

one's control result in imperfect competition. Workers, for example, are anxious to secure high wages. If, then, the wages of carpenters are higher in Baltimore than in Atlanta (living costs being the same), we should expect carpenters to move from Atlanta to Baltimore and compete for the high-priced jobs in the latter city. As a matter of fact, there are often fairly wide differences in the wage scales of two or more cities, without any appreciable movement of laborers from one to another. The reason may be ignorance of the situation on the part of the workers, or an indisposition to move from an established abode even for a gain in income. Thus, the lack of knowledge on the part of buyers and sellers, and imperfect mobility of commodities and services, prevent competition from working with complete exactness in the several branches of economic life.

Agreements and combinations of various kinds are also responsible for restricted competition. "Gentlemen's agreements" between those in control of great business interests have often interfered with the realization of a perfectly competitive price. "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices," wrote Adam Smith in 1776. And this was a century and a quarter before the advent of the famous "Gary dinners," at which leaders in steel manufacture are said to have agreed, year after year, upon the price to be charged for steel in the United States during the next twelve-month period. The combination, under a single management or policy-forming body, of the important producing units in the oil, sugar, and tobacco industries has at times had a similar effect. Most powerful of all, in stifling competition, is a condition of complete or almost complete monopoly, such as was once exercised by the Aluminum Company of America, which had captured a very large percentage of the country's supply of raw materials essential in the manufacture of aluminum goods. Complete monopoly, of course, is the absence of competition, with but one buyer or one seller, as the case may be, in the market; while perfect competition is a situation in which there are many buyers and many sellers and a complete absence of combination among the members of either of these groups.

COOPERATION

But not all is competition in the world of economics. Cooperation also plays a part, and sometimes an important part, in economic relationships. Whenever it appears better to men to work in accord rather than in conflict, cooperation is likely to take the place of competition. We have already seen that deliberate cooperation, as in the case of steel magnates agreeing to uphold a monopoly price, may constitute an interference with competition. Other examples of organized cooperation that lessens the effectiveness of competition may be found in the trade associations

of business men, the trade unions of workers, and the marketing cooperatives of farmers and fruit growers. We shall look further into organized cooperation in a later chapter, confining our present discussion to cooperation of a somewhat different kind.

There is being practiced continually a type of cooperation which is seldom recognized as such by those who take part in it. Indeed, our modern specialization, with every man confining his efforts to a very limited field of work, would be unthinkable without cooperation. The teacher may devote himself to his classes and his books only because others are cooperating by providing him with food, shelter, and clothing. The miner produces only coal, and depends on the cooperation of the farmer to supply him with food. The farmer tills the soil and raises his crops, but looks to the carpenter to build his barn, the machinist to make his implements, and the barber to cut his hair. In any modern factory cooperation may be seen to excellent advantage, for present-day industry is dependent upon the various types of workers, each with his particular function in the productive process, joining together intelligently and willingly in turning out economic goods.

Examples of cooperation between producers and consumers are apparent on every side. I decide to take a trip to Chicago, and find a host of people anxious to cooperate in making the journey as easy and pleasant as possible. The telephone company cooperates by putting me in touch with a taxicab company. The taxi people cooperate by delivering me promptly and safely to the railway station. The railroad cooperates by having the train ready for me at a convenient hour, and by providing not only transportation but dining and sleeping accommodations. Lunch time arrives, and I discover that my wants in the matter of food have been anticipated. Not only is food available, but an effort has been made to cooperate with me to the extent of supplying the kinds of food most likely to appeal to my tastes. Upon arriving in Chicago, I discover that I am expected, and a hundred hotels are ready to cooperate by providing comfortable quarters.

It is not correct, of course, to intimate (as we have done) that these several acts of cooperation are of a personal nature. On the contrary, they are distinctly impersonal, since those who help to make my trip a pleasant one do so not from personal good will or friendship for me, but from the very practical motive of self-interest. "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest," says Adam Smith. We find, then, in every phase of business life the desire of producers to discover and minister to the needs and wants of others—to cooperate, in effect—so that they, the producers, may secure an income through rendering the desired service.

THE PRICE SYSTEM

The existence of capitalism implies a complicated system of economic life, with commodities and services exchanging for money, and this money exchanging again for commodities and services. When indirect exchange of this kind supplants barter, a system of prices develops; and upon the operation of this system depends the distribution, among members of society, of land, labor, and capital to be used by enterprisers in production, and of consumers' goods and services to be employed in the direct satisfaction of human wants.

The intricacies of the price system are so many and important that we shall give them extended description in Chapter 17. Our purpose in introducing the subject thus briefly at this point is to emphasize the fact that the price system is an outstanding institution of capitalism.

ECONOMIC HARMONY

Adam Smith and other economists have defended freedom of economic action on the ground that it furthers the economic interests not only of individuals but of society as a whole. It was Smith who made the famous statement that a man, in seeking his selfish economic advancement, is "led by an invisible hand to promote an end which was no part of his intention." This end, of course, is the economic well-being of the community, which Smith felt was best served by a policy of governmental non-intervention in economic affairs.

An Example of Economic Harmony. There is a mixture of truth and untruth in this so-called "doctrine of economic harmonies." It is probably true that the late Henry Ford, while piling up his millions, contributed much to the satisfaction of human wants. The argument to this effect would run about as follows: Henry Ford became rich because millions of people, over a period of almost a half century, have showered their dollars upon him. But people in general are not altruists. They are, on the contrary, anxious to get the most for their money; and the fact that they spent their money with Mr. Ford and not with someone else is proof that he gave them more for their dollars than they could get elsewhere. Hence, society benefited by Ford's selfish endeavors. To summarize: The institution of free enterprise allowed Mr. Ford to choose the business into which he would go. He decided that he could make most by manufacturing automobiles. Events showed that he chose wisely, for he made a huge fortune; but in making it he was "led by an invisible hand to promote an end which was no part of his intention"—that is, he was led into being something of a public benefactor.

Unfortunately for the doctrine of economic harmonies, the argument does not always work out so neatly. Indeed—to pursue a little further the

case of Henry Ford—it would be hard to prove that his business life was guided by purely mercenary motives, for human motives are always difficult and sometimes impossible to fathom. It is quite possible, then, that Mr. Ford had in mind throughout his career not only the acquisition of wealth, but also the winning of a great name as a captain of industry; or he may have been motivated primarily by the desire to show that his “horseless carriage,” which was the cause of so much mirth in the days of its infancy, could be made the basis of a gigantic American industry. Finally, even if all should grant for the sake of argument that Mr. Ford’s business activities yielded great social benefits, how can we know that his benefactions have been mere by-products of his money-getting—as they must have been if they are to confirm the doctrine of economic harmonies—and not the prime object of a man who, like Abou Ben Adhem, sought to be written down as “one that loves his fellow-men”?

Shortcomings of the “Invisible Hand.” But if it is difficult to show that the economic good works that occur are the incidental outcome of economic self-interest, it is still harder to prove that social good inevitably follows every attempt of men to win individual economic success. In other words, the doctrine of economic harmonies does not always work; the “invisible hand” lets a good many people slip by on the road to wealth, without collecting the toll—in the form of social service—which the doctrine of economic harmonies says must be paid by all who pass that way. Whenever a monopolist, in order to secure an artificially high price for his product, deliberately restricts the quantity of the good that the public is allowed to consume, he is outwitting the “invisible hand.” Whenever a merchant palms off a shoddy article on an unsuspecting customer and charges the price of first-class goods, he is disproving the inevitability of the doctrine of economic harmonies. And whenever the maker of a patent medicine sells a worthless concoction to suffering humanity and thus delays the scientific treatment of disease, he is so far from promoting the “end” to which Adam Smith referred that he is in truth an enemy of the people.

These and a thousand other examples that might be cited show that economic harmony does not always prevail. It still seems highly desirable that a man shall ordinarily be permitted to choose his life work, for in so doing he is likely to find the job he can do best and with most enthusiasm and enjoyment. But we have long since recognized the need for governmental “interference” with monopoly, for laws penalizing the misbranding of certain kinds of commodities, and for regulation of the sale of some of the more dangerous drugs and narcotics. The movement has a long way to go before the public will be adequately protected against these unscrupulous, unsocial individuals whose manner of doing business seems to indicate direct descent from an “economic man” of the most vicious type. There has been need, then, for a revision of the doctrine

of economic harmonies, and Professor Carver has restated it in these words: "*Under proper government interference and control*, men are led as by an invisible hand, to promote the public interest while trying to promote their own."⁷ Just what constitutes "proper government interference and control" is debatable, but if the italicized clause is given a sufficiently liberal interpretation, this modernized version of the doctrine of economic harmonies appears to be essentially sound.

1. What is the meaning of "self-interest"? Of "economic self-interest"?
2. How is economic self-interest related to the limitation of goods described in Chapter 2?
3. Give several illustrations of the existence of economic self-interest.
4. Describe the "economic man."
5. On what grounds has the concept of the economic man been attacked? Are these objections valid?
6. What evidence is there that economic self-interest is often modified in actual practice? Be specific.
7. Give several illustrations (not taken from the text) of "buying in a cheap market and selling in a dear one."
8. "This principle of self-interest has played an important part in economic progress." Explain.
9. What is the meaning of "private property"?
10. Is the institution of private property hedged about by restrictions of any kind? Explain.
11. Why, in the absence of this institution, might people confine their economic efforts largely to the production of non-durable goods?
12. "The institution of private property . . . aids in the development of an industrial order." How?
13. Define or describe "free enterprise."
14. Contrast the individual's opportunity to choose an occupation under the manorial system, with the "freedom of enterprise" of today.
15. Do not governmental restrictions (such, for example, as state bar examinations for lawyers) destroy our pretensions to freedom of enterprise? Explain.
16. Is "free enterprise" synonymous with "equality of opportunity"?
17. Define "contract."
18. Discuss the relationship between free enterprise and freedom of contract.
19. Comment on the enforcement feature of the contract.
20. Competition has the effect of forcing prices up, and also of driving prices down. Explain this seeming contradiction.
21. Give an example (not taken from the text) of competition between sellers of (a) *like*, (b) *substitute*, and (c) *unlike* goods.
22. What is a "seller's market"? A "buyer's market"?

⁷ T. N. Carver, *Essays in Social Justice*, Cambridge, Harvard University Press, 1922, p. 109.

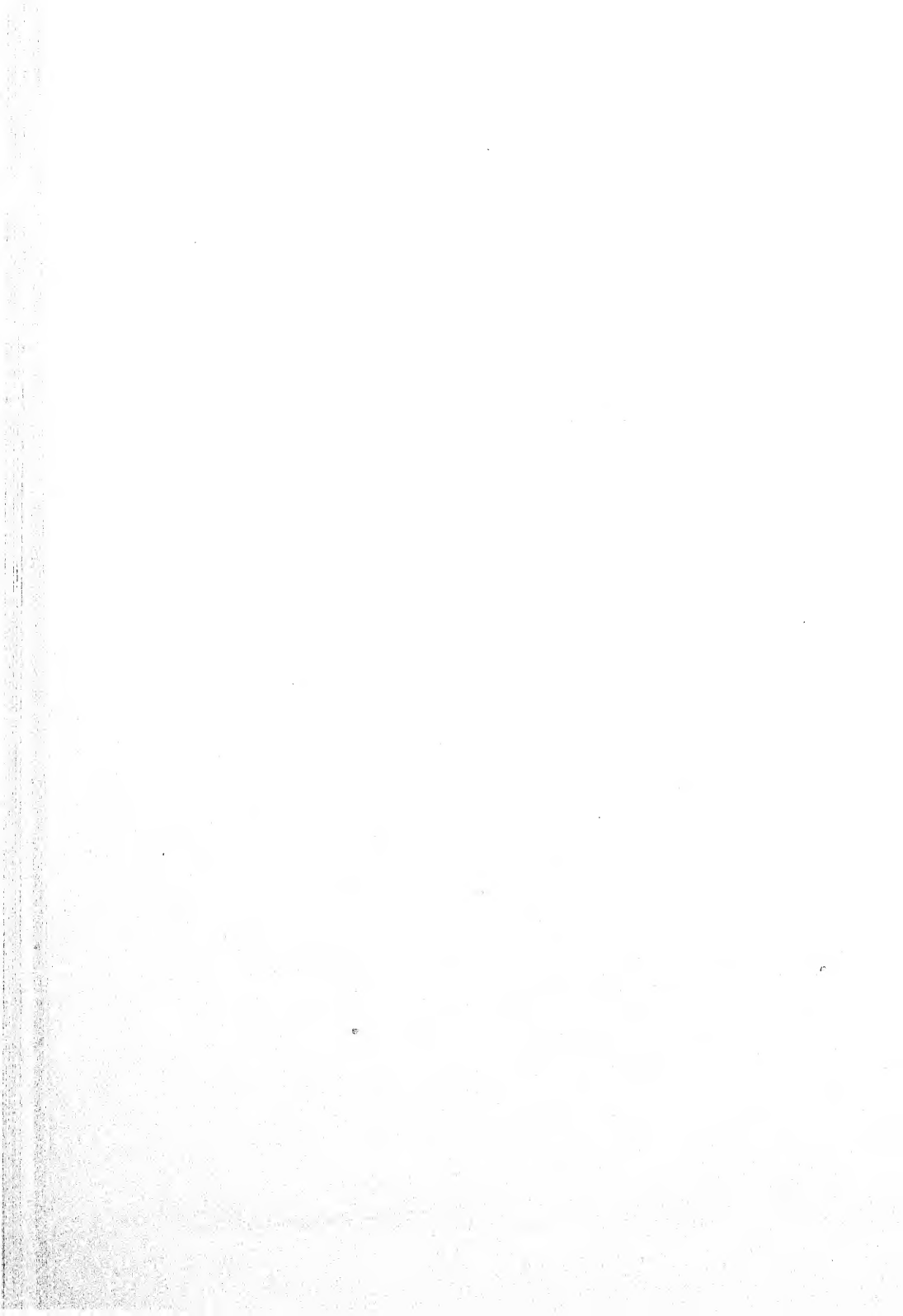
23. Business men "compete not only for the patronage of consumers, but for the agents of production as well." Explain, with an illustration.
24. Competition is seldom perfect. What conditions prevent perfect competition from being realized?
25. What is "complete monopoly"?
26. When may we expect to find planned economic cooperation instead of economic competition?
27. Describe several types of organized economic cooperation.
28. "There is being practiced continually a type of cooperation which is seldom recognized as such by those who take part in it." Explain, with illustrations.
29. If most cooperation is impersonal in nature (as in reality it is), what motive impels individuals to engage in such cooperation?
30. What is the central idea of the "doctrine of economic harmonies"?
31. What reasons are there for questioning the validity of this doctrine?
32. In what respect is Professor Carver's restatement of the doctrine of economic harmonies an improvement over the "invisible hand" concept of Adam Smith?

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PART TWO

The Economics of Production



The Nature of Production

PRODUCTION IS USUALLY DEFINED BY ECONOMISTS AS THE CREATION OF UTILITY. We have already described utility as being synonymous with wantedness and desiredness. It is, therefore, *that relationship of a good to a human being which is expressed by saying that the good is desired by the human being*.¹ It follows that anything that may be done in the way of increasing the desiredness of an economic good must be regarded as production.

Most of the activities which take place in our economic society are directed toward this end. The problem of economic society is, in large part, to change land—that is, natural resources—into finished goods, and to place those goods in the hands of the persons who will consume them.² Then and then only may they properly be termed “consumers’ goods.” We may emphasize this point by quoting a British economist who in this statement is rebutting the notion, once current, that some types of industrial workers—such, for example, as those engaged in the sale and transportation of goods—are unproductive. He says: “It is a useful, if trite, maxim that production is not completed until the commodity, whatever it be, is in the hands (or on the table) of the consumer; and if we ask for bread, the ploughman, the miller, the baker and the baker’s van-boy . . . all alike minister to our needs. What is wanted in this life is the right thing in the right place at the right time, and all who contribute to this so desirable end are economically, on this point at least, doing the same kind of thing.”³ In this work of production there are activities of a number of kinds, and we may profitably examine the several types of utility the creation of which constitutes production.

IMPORTANT TYPES OF UTILITY

Form Utility. One type of utility which comes promptly to mind is *form utility*. The creation of form utility consists of taking raw materials,

¹ This definition of “utility” is the one adopted by the Committee on Economic Accord in 1934. Cf. *Handbook of Accepted Economics Definitions, Principles, and Statements*, New York (236 Wooster Street), W. I. King, p. 3.

² The term “goods” must be understood to include services, or non-material goods, as well as commodities, or material goods. Many services, of course, require in their performance very little use of natural resources but much labor.

³ Alexander Gray, *The Development of Economic Doctrine*, London, Longmans, Green & Company, 1931, p. 106.

or partly finished goods, and making them more desired by changing their form. The miner who digs coal, the lumberer who hews trees into logs, and the fisherman who catches a supply of sea food, are taking natural resources and putting them into a more desirable form. The farmer likewise creates form utility when he produces grain and meat for food purposes, cotton and wool for clothing, and so on.

But the creation of form utility is most clearly apparent in the field of manufacturing. Iron ore is mined, then smelted into pig iron, later made into steel, and finally fashioned into high-grade tools. In each step of this process an advance is made, and therefore in each step there is the creation of further utility. Every person engaged in the task of changing iron ore into a fine cutting tool (or any other commodity) is, therefore, a producer. The same is true in every field of manufacture. Cotton is spun into yarn, woven into cloth, and the cloth manufactured into clothing; and each of these processes constitutes a creation of form utility. Building materials are fashioned into houses, and here again form utility is created.

Indeed, so obvious is it that manufacturing ordinarily means the creation of form utility that some business men and others are inclined to think of the workers in manufacturing plants as producers—because they *make* things—and to overlook the fact that the manager in the office, and the clerks and typists, are producers just as truly as are the day laborers and skilled artisans. All of these persons make some contribution to the production of the commodity that is being turned out by the plant. And all persons—whether hand or brain workers, whether poorly paid or well paid—who are engaged in manufacturing, in agriculture, or in the extractive industries such as mining, fishing, and lumbering, are creators of form utility.

Place Utility. Another type of utility is that created by transporting goods from one place to another. Wheat in Nebraska and oranges in California are of no use to would-be consumers in Pennsylvania or New York until they have been transported to the state in which they are to be eaten. This transfer of goods from one region to another brings into being a new utility which is known as *place* utility. The tremendous growth in the transportation of passengers and commodities throughout the world by water, rail, motor vehicle, and air lines, is an indication that utility is created by the movement of people and goods from one place to another. The enjoyment afforded the people of the United States through the use of sugar from Cuba, coffee from Brazil, rubber from the Malay Peninsula, and diamonds from South Africa, must be credited in large part to those who have developed our modern systems of transportation, by means of which these commodities from distant lands have been made available for us.

Possession Utility. But the manufacture and transportation of an economic good do not necessarily complete its “production.” A Hamilton

watch in the showcase of the jeweler is not fully "produced," since it is more desirable, and more desired, in the hands of a person who has no timepiece than in the jeweler's shop. Consequently, the sale of a watch, or of any economic good, creates a new utility which is known as *possession* utility. It is correct to say, therefore, that many persons who are engaged in salesmanship are producers quite as much as are those who make a good in the first place.

We must include also, in the creation of possession utility, much of the advertising which is carried on so extensively today. It has been estimated that our annual expenditure for advertising in the United States runs well over two billion dollars. Advertising in 1945 included the following important types: Newspaper, \$660,000,000; premium and novelty, \$350,000,000; direct mail, \$270,000,000; magazine, \$330,000,000; radio, \$400,000,000; outdoor, \$90,000,000; business paper, \$107,000,000; farm paper, \$20,000,000; and miscellaneous, \$500,000,000.⁴ One writer estimates that in this country the magazines get 53.4 per cent, the newspapers 74.1 per cent, and the radio approximately 100 per cent of their total income from advertising. Whenever, through the medium of advertising, the desiredness of a good is increased—which means that it is now more wanted than it previously was—the advertising may (with the exception noted below) be called the creation of possession utility.

This is the case, despite the fact that to many persons much of the advertising of today is definitely objectionable. An analysis of twelve of the leading magazines made a dozen years ago—and there is no reason to suppose that the situation has changed—showed that a large percentage of their advertising consisted of appeals to fear, sex desire, and emulation in conspicuous consumption. "The whole object of research," according to a statement credited to the research director of a great automobile concern, "is to keep everyone reasonably dissatisfied with what he has in order to keep the factory busy in making new things"; and a similar statement might be made about much of our advertising. Nevertheless, if advertising increases the desiredness of goods, it is creating possession utility and is thus furthering production.

The exception to which we referred above has to do with such advertising as increases desiredness in one spot only to reduce it in another. Examples may be seen, on every hand, of advertising that is designed to persuade consumers to buy one particular brand of a good in place of another brand to which they have become accustomed. Indeed, in many of the current radio "commercials" this purpose of advertising is quite undisguised. "Then why not shift to *Blank* brand?" we are asked time and again by radio announcers. We are urged to smoke Lucky Strikes in place of Camels, and Camels in place of Old Golds, and Old Golds in place of Lucky Strikes. It seems probable that advertising of this kind,

⁴ *Printers' Ink*, March 15, 1946, p. 21.

in the main, simply transfers one's cigarette allegiance from one brand to another without any net increase in *possession* utility. Of course, advertising of this type may conceivably result in initiating a non-smoker into the joys—and, *mirabile dictu*, the health-giving benefits!—of cigarette-smoking, in which case we may suppose that there has been an *increase* and not merely a *shift* in desiredness, and that the advertising is therefore productive.

But even if this sort of advertising does not add to the desiredness of the good that is being extolled, and therefore does not constitute the creation of *possession* utility, it does render a service which is desired by the buyers of the advertising—or it would not be purchased—and therefore (by definition) comes under the heading of utility. It is probably best to classify such advertising as *service* utility, which will be described in a later section.

Time Utility. Another type of utility is *time* utility. Certain individuals are engaged in the storage of goods. Storage consists of holding goods from a time when they are little wanted until another time when they are more desired. Owners of grain elevators in the "wheat belt" store millions of bushels of wheat at the height of the harvest season, and hold this wheat until such time as there may be a greater demand for it. Cold storage operators put away eggs in the summer when eggs are plentiful and cheap, and hold them until winter when eggs are scarce and high. In doing this, the operators of storage houses add to the desiredness of the goods, and thus create utility—time utility. The speculators in the produce markets render a service somewhat similar to that which has just been described, but their activities will be dealt with in a later chapter.

Service Utility. Finally there are persons engaged in creating *service* utility. This particular classification has to do with those who are rendering personal service rather than dealing in material goods. The lawyer, the doctor, the preacher, and the teacher sell not material goods, but a personal service consisting sometimes simply of advice or information. Since services such as these are desired, the persons who render the service create utility, and consequently fall within the classification of producers.

Our business and social relations are facilitated by the adjustments made in our courts; hence, lawyers create utility when they give advice and plead cases. Physicians who assist in maintaining the good health of individuals and of society in general are likewise creators of utility; and the same may be said for ministers and other advisers who bring comfort, consolation, and peace of mind to members of society. Teachers, in arousing in their students an interest in things intellectual, are helping them to achieve a fuller enjoyment of life; and in doing this they create utility quite as much as though their work were distinctly vocational and aimed directly at the training of skilled workers or business experts.

Tragedians who make us weep, and comedians who make us laugh, are engaged in production because they bring diversion and entertainment into a world in which there is much need for this sort of thing.

There are, in addition to these, our governmental officials, from the President of the United States down to the humblest public servant, all of whom help us carry on the orderly conduct of our business life. There are also persons engaged in handling the risks of industry, such as insurance men, who create service utility. The list is by no means complete, but it may easily be enlarged by the reader, who will experience no difficulty in finding examples not only of service utility but of utility of the other types that we have discussed.

Difficulty of Classifying Utility. The classifications which have just been made are not necessarily hard and fast. Like most classifications, they are made largely on an arbitrary basis; and it may be confessed that it would be impossible to classify satisfactorily all types of producers in a highly developed economic society. One difficulty which often arises is the classification of such workers as stenographers, bookkeepers, office boys, and watchmen. Students who experience difficulty in finding a ready classification for these producers usually wind up by sticking them into the pigeonhole marked "service utility," which seems to provide a convenient catch-all for workers who do not fit easily elsewhere. A more logical arrangement, however, is to classify them on the basis of the type of utility that is being created by the concern for which they work. Thus, a stenographer in the employ of the Baltimore and Ohio Railroad is creating place utility since her services contribute to the movement of trains from place to place. A bookkeeper who works for the Bethlehem Steel Company is, then, a creator of form utility; an office boy at Macy's department store in New York is a creator of possession utility; and a watchman who guards a giant grain elevator in Minneapolis is a creator of time utility. Perhaps the chief benefit to be derived from classifying economic activities is to impress upon ourselves the fact, already noted, that there are various kinds of production—since there are various types of utility being created—and that any person who does anything which in any real sense of the term results in additional utility is a producer. The production of a commodity begins with the raw material and does not end until the finished good is in the possession of the person by whom it is to be consumed. Everyone who adds to its desiredness is a producer, though many who help do so *indirectly*. Service utility, it may be noted, is usually created by the producer rendering some service *directly* to the consumer. But there are exceptions. For example, I may never find it necessary to call an officer of the law to protect me from attack, and yet I would certainly not, on that account, deny the utility of an organized police force.

THE FACTORS OF PRODUCTION

The productive process, as we have seen, consists of converting raw materials into goods and getting these goods into the hands of the persons for whom they have utility. This process may be illustrated graphically by a series of concentric circles, such as we have in Fig. 2. The innermost of these circles is intended to represent land, which, it will be remembered, includes all natural resources. The outermost section is labeled "consumers' goods," and here we find those commodities which are ready

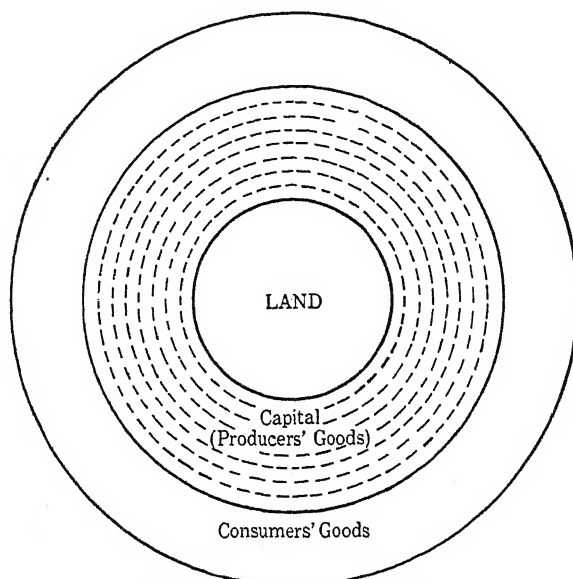


FIG. 2. THE PRODUCTIVE PROCESS

This process consists of converting land into consumers' goods, with the aid of labor and capital (or producers' goods). (Production also includes, of course, the creation of non-material goods, or services.)

for use and in the possession of the ultimate consumer. Between these two stages in the productive process is a whole series of intermediate stages, indicated in the diagram by dotted circles. All of this space between land and consumers' goods is occupied by capital, or producers' goods.

Land. The importance of *land* in economic production has already been noted and need scarcely be emphasized further. It is a wholly indispensable factor, for without it there could be no production. Land is *natural resources created without the assistance of labor*. We can readily see that these natural resources, such as soil fertility, mineral deposits, natural vegetation, water-power resources, and so on, are absolutely essential to the conduct of modern industry.

The true productive significance of the land assets of the United States cannot be demonstrated statistically, but a few figures may be given to show how richly this country has been endowed in the way of natural resources. The total land area of the United States is about two billion acres, of which approximately one-half is in farms. This farm land and the buildings on it are valued at about fifty billion dollars. Though we originally had some 816,000,000 acres of forests, our present total forest area is about 630,000,000 acres, of which 460,000,000 acres constitute commercial forest area.

We are using our mineral resources rapidly, the value of minerals produced in the United States annually totaling nearly five billion dollars. The most important minerals, in total value of product, are coal, iron ore, and petroleum. Our stocks of fish and game, originally very extensive, have been dissipated by wasteful exploitation. The water-power resources of the country are of great economic significance, and a controversy has been raging as to whether they shall be developed under private or public ownership.

Labor. But natural resources do not have maximum utility until they have been worked upon by man. Hence we say that *labor* is an essential factor in production. Labor is ordinarily defined as *human energy expended for the purpose of acquiring income*. This definition rules out those activities of man which are recreational in nature. A man is a laborer only when the tasks in which he engages are carried on for the sake of the real income derived, and not for the pleasure incidental to the undertaking.

Here, as in so many instances, we find it difficult to classify individual items with absolute exactness. According to our definition, Miss Alice Marble was not a laborer when she played championship tennis as an amateur, but she became a laborer the moment she entered the field of professional tennis in 1940; yet she probably played as hard in one case as in the other. Of course, a college football or baseball player would be a laborer if for his playing he were receiving a scholarship of some kind. It is almost impossible, then, to make exact classifications, but for all practical purposes the student of economics can decide in each given case whether a man is a laborer or not.

In a highly industrialized country, such as the United States, labor is employed in a multitude of ways. Government figures show that the number of gainful workers in this country—the term “gainful workers” including all who are engaged in occupations which bring in a money income—totaled about sixty million persons in 1945. In economic terminology, these workers constituted the labor supply of this country.

Approximately 16 per cent of these persons worked on farms. Some 12 per cent were engaged in trade or finance, and 31 per cent in industry of various kinds. Eighteen per cent were at that time in the military

service, 19 per cent in non-military service industries, and the remainder in miscellaneous industries and services.

Capital. *Capital* may be defined as *produced goods intended for further production*. This definition sets it apart from land (that is, natural resources), since the latter is not, in the economic sense, "produced," but is a free gift of nature. Capital includes goods which are designed for ultimate consumption; that is, partly finished goods in process of production which, though they are no longer in the raw state, have not yet progressed sufficiently far as to be ready for consumption, and consequently are not consumers' goods. Capital includes, also, goods that are sometimes termed "instruments of production," such as factories, machines, and tools. Capital of this kind is not destined to satisfy human desires directly, but serves only as a means of producing further consumers' goods. A tremendous amount of the wealth of every modern industrial society is composed of capital, which is clearly marked in the intermediate section of Fig. 2.

It is not possible to give a complete or strictly accurate idea of the stock of capital in a great industrial country, but estimates of the National Industrial Conference Board are of some assistance in this connection. Manufacturing machinery, tools, and so on, in the United States, were estimated in 1940 to be worth \$11,250,000,000; farm implements and machinery, \$1,596,000,000; livestock (a form of capital), \$5,024,000,000; railroads and their equipment, \$26,000,000,000; and privately owned electric light and power plants, \$12,597,000,000.

The first three of these five items are unquestionably capital, as we have defined the term; but railway companies and private water companies doubtless include in their valuation certain items of non-capital, such as land, franchises, and so on. A number of deductions would have to be made, therefore, before our picture could be considered correct. Additions also would be necessary, for the figures given above do not include the value of factory buildings, or of "improvements" such as the clearing, draining, and fencing of agricultural land. At best, then, the above estimates are merely suggestive of the large quantity of capital essential to the conduct of present-day economic projects.

An examination of the world about us shows that we are regularly turning immense quantities of natural resources into goods which cannot give direct enjoyment to human beings, but which do so in an indirect or roundabout way. No direct enjoyment is derived from the operation of an oven in a baking establishment. Consequently, it could not, by any stretch of the imagination, be called a consumers' good. However, an oven is distinctly useful in that it contributes to the production of bread, which is, of course, a consumers' good when it comes into the possession of hungry human beings.

Capital, then, is one of the most important factors of production. It

is generally recognized as an essential part of any highly productive economic order. Even the extreme economic radicals of today have but little fault to find with the use of capital; and few, if any, would suggest seriously that we do away with its use and revert to the old-time hand method of manufacture. If we did this, we should all suffer through the limited quantity of consumers' goods that we should then be able to make. The socialists believe, however, that capital should be owned and controlled collectively, and not by private individuals as is the case in capitalist economies.

The Business Enterpriser.⁵ The fourth and final factor in production is the *business enterpriser*, who is *the person that assumes the ownership and hence the risks of business*. The enterpriser has to pay for the use of the land, labor, and capital employed in his business, and hopes to receive for the goods produced an amount larger than his total expenses. If he does so, he reaps profits. But he may have to take losses. Therefore, he is clearly a risk-bearer.

We must emphasize the fact that *ownership*, and not *management*, is the distinguishing characteristic of the business enterpriser. A business executive who commands a salary of \$100,000 a year is not an enterpriser but a high-grade laborer who is paid wages (or salary), unless he is at the same time an owner, or part-owner, in the undertaking. On the other hand, a wealthy man who buys an interest in a business is by virtue of that purchase an enterpriser, though he takes no part whatsoever in the actual operation of the business. By the same token, every person who owns one or more shares of stock in any business corporation is, to the economist, a business enterpriser. By buying stock, he becomes a part-owner of the business, and in accepting the responsibilities of ownership he becomes, by definition, a business enterpriser. The corporation itself, since it is a group of stockholders, is a business enterpriser, as we have defined the term (though it is more often called a *business enterprise*)—and this is true regardless of its size.

Since some business concerns have hundreds or thousands of part-owners, there are many more *enterprisers* than *enterprises*. But there are also, in this country, a great many business enterprises, in the sense of separate and distinct business units. The reason is that many a business unit is owned by a single individual. Many men carry on small manufacturing or merchandising businesses, or engage in business on their own account as farmers, lawyers, engineers, physicians, and so on. These enterprisers on a small scale are so numerous that the National Industrial Conference Board estimates that there are more than nine million business enterprisers in the United States. We have more than six million farm owners and one and one-half million commercial retailers, and these two

⁵ Many writers use the term "entrepreneur" instead of "enterpriser," and some English economists prefer the word "undertaker."

groups account for a very considerable percentage of the total number of enterprisers given above. Not all of this large number, it need scarcely be added, are successful. Many men attempt to carry on businesses without possessing the requisite ability. They sooner or later fall by the wayside, and their names go to swell the lists of bankruptcies in this country.

DIRECT AND INDIRECT PRODUCTION

Production is indirect or direct, depending upon whether consumers' goods are produced with or without the use of capital. A famous description of direct and indirect production, which has never been surpassed for interest and clarity, is from the pen of a great Austrian economist, Böhm-Bawerk.⁶ It runs as follows:

A peasant requires drinking water. The spring is some distance from his house. There are various ways in which he may supply his daily wants. First, he may go to the spring each time he is thirsty, and drink out of his hollowed hand. This is the most direct way; satisfaction follows immediately on exertion. But it is an inconvenient way, for our peasant has to take his way to the well as often as he is thirsty. And it is an insufficient way, for he can never collect and store any great quantity such as he requires for various other purposes. Second, he may take a log of wood, hollow it out into a kind of pail, and carry his day's supply from the spring to his cottage. The advantage is obvious, but it necessitates a roundabout way of considerable length. The man must spend, perhaps, a day in cutting out the pail; before doing so he must have felled a tree in the forest; to do this, again, he must have made an axe, and so on. But there is still a third way; instead of felling one tree he fells a number of trees, splits and hollows them, lays them end for end, and so constructs a tunnel or rhone which brings a full head of water to his cottage. Here, obviously, between the expenditure of the labor and the obtaining of the water we have a very roundabout way, but, then, the result is ever so much greater. Our peasant need no longer take his weary way from house to well with the heavy pail on his shoulder, and yet he has a constant and full supply of the freshest water at his very door.

Another example. I require stone for building a house. There is a rich vein of excellent sandstone in a neighboring hill. How is it to be got out? First, I may work the loose stones back and forward with my bare fingers, and break off what can be broken off. This is the most direct, but also the least productive way. Second, I may take a piece of iron, make a hammer and chisel out of it, and use them on the hard stone—a roundabout way, which, of course, leads to a very much better result than the former. Third method—Having a hammer and chisel I use them to drill a hole in the rock; next I turn my attention to procuring charcoal, sulphur, and nitre, and mixing them in a powder; then I pour the powder into the hole, and the explosion that follows splits the stone into convenient pieces—still more of a roundabout way, but one, which, as experience shows, is as much superior to the second way in result as the second was to the first.

⁶ Eugen von Böhm-Bawerk, *The Positive Theory of Capital*, New York, G. E. Stechert & Company, 1923 (reprint), pp. 18, 19.

Yet another example. I am short-sighted, and wish to have a pair of spectacles. For this I require ground and polished glasses, and a steel framework. But all that nature offers toward that end is silicious earth and iron ore. How am I to transform these into spectacles? Work as I may, it is as impossible for me to make spectacles directly out of silicious earth as it would be to make the steel frames out of iron ore. Here there is no immediate or direct method of production. There is nothing for it but to take the roundabout way, and, indeed, a very roundabout way. I must take silicious earth and fuel, and build furnaces for smelting the glass from the silicious earth; the glass thus obtained has to be carefully purified, worked, and cooled by a series of processes; finally, the glass thus prepared—again by means of ingenious instruments carefully constructed beforehand—is ground and polished into the lens fit for short-sighted eyes. Similarly, I must smelt the ore in the blast furnace, change the raw iron into steel, and make the frame therefrom—processes which cannot be carried through without a long series of tools and buildings that, on their part again, require great amounts of previous labor. Thus, by an exceedingly roundabout way, the end is attained.

The lesson to be drawn from all these examples alike is obvious. It is—that a greater result is obtained by producing goods in roundabout ways than by producing them directly. Where a good can be produced in either way, we have the fact that, by the indirect way, a greater product can be got with equal labor, or the same product with less labor. But, beyond this, the superiority of the indirect way manifests itself in being the only way in which certain goods can be obtained; if I might say so, it is so much the better that it is often the only way!

Economy of the Indirect Process. The first of Böhm-Bawerk's illustrations is an excellent example of a productive process which has become increasingly capitalistic, and therefore increasingly roundabout. The peasant at the outset used the direct process of production, but finally was supplied with water by a very indirect or roundabout process. If we wished to carry the illustration a step further, we might cite the water supply systems of our large cities, where the amount of capital involved is extremely great but the service rendered to the consumers is likewise very great. Though it takes months or even years to provide the equipment used in our modern water systems, no one will question that the time is well spent; and—judging from this illustration, and from thousands of others that may be drawn from daily life—we may say with assurance that usually the indirect or roundabout process of industry is decidedly economical in the long run.

Pieces of capital, or producers' goods, may well be thought of—as Böhm-Bawerk suggests—as "friendly allies" in the work of production. "Every roundabout way means the enlisting in our service of a power which is stronger or more cunning than the human hand; every extension of the roundabout way means an addition to the powers which enter into the service of man, and the shifting of some portion of the burden of production from the scarce and costly labor of human beings to the prodigal powers of nature."⁷

⁷ *Ibid.*, p. 22.

The Accumulation of Capital. The essential element of this indirect process is the use of large quantities of capital. This capital is accumulated gradually. It is accumulated because some persons, instead of consuming everything they create, decide to save part of their product, or income. Capital accumulation means refraining from consumption, and spending for producers' goods, or capital, a part of a money income which might have been spent entirely on consumers' goods. When an individual reduces his consumption of ice cream, theatrical performances, excursions, and other luxuries, and with the savings thus made purchases machinery—as he may do, for example, by buying a share of stock—he is creating capital and is himself becoming a capitalist. He is placing part of his income in the middle section of our diagram, where it will remain for a time, and perhaps permanently, as an important factor in our industrial process.

Capital, therefore, in many cases represents self-denial on the part of the savers; but in some instances the savers' money incomes are so large that it would be absurd to say that there has been any sacrifice. Not until a person has a money income larger than he must spend for immediate needs—that is, a *surplus*—can he save. Capital therefore comes into being as a result of a surplus, and, as we have seen, this surplus must be invested in producers' goods before there is any addition to the total stock of capital in the country.

We should add that it may be a *corporate* instead of an individual surplus; for in many instances the directors of a corporation decide to use a portion of its profits for the purchase of additional capital, in place of distributing it among stockholders in the form of dividends.

The Nature of Capital. It will be well at this point to emphasize the fact that capital consists of goods, and not of money. The business man will often speak of his capital in terms of money, but if we were to question him closely we should discover that what he really has in mind is the concrete goods that his money has purchased, and that he has expressed these goods in terms of money simply as a matter of convenience. When a manufacturer, for example, refers to his capital of \$50,000, what he says, in effect, is that he controls land, a factory building, machinery, and certain materials, which represent an outlay of \$50,000. To the economist, all of these concrete goods, except land, may properly be called capital. Land, as we have seen, is placed in a separate category for reasons which will appear later.

Unless this economic concept of the term "capital" is kept clearly in mind, confusion is certain to arise. We have seen that cups, buckets, and pipe lines are productive because they are producers' goods (or capital) which make it possible, with a given expenditure of human effort, to secure a larger supply of water than could be had without their aid. Money *as such* does not, of course, aid in the production of water or any-

thing else. But since it is a claim upon economic goods, it may be exchanged for cups, buckets, pipe lines, and other useful pieces of producers' goods, and thus it performs a useful function in a highly organized society.

In much of our economic discussion, the issues become far clearer whenever we are able to push aside the money concept and get down to fundamentals, which usually means speaking in terms of goods. Hence, it is recommended that we hold fast to our definition of capital as produced goods intended for further production.

PRODUCTION, INCOME, AND WEALTH

Fig. 3 illustrates the process of production employed by man in his endeavors to satisfy his wants by utilizing the scarce means provided by nature. These scarce means are the natural resources which, as students of economics, we call land. Once the productive process has made substantial headway, man finds himself in possession not only of land but of capital and unused consumers' goods as well. These material goods are labeled "Wealth (Jan. 1)" in our figure, and include all of the desired, scarce, transferable, material things in existence at that time. Labor, though not a part of wealth, has been included in the diagram for the

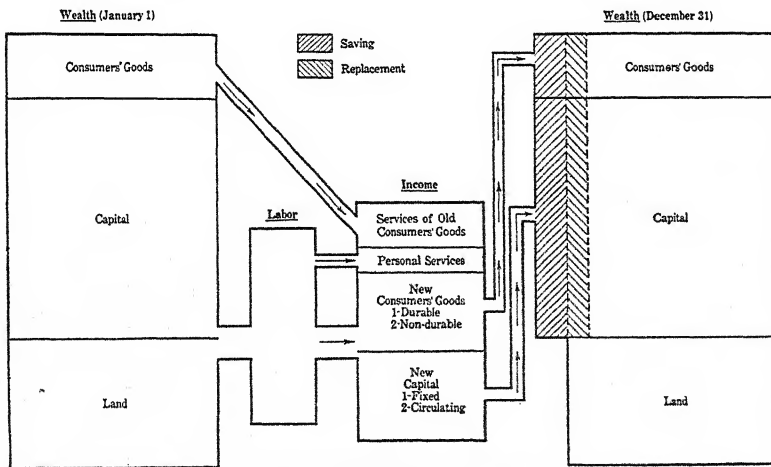


FIG. 3. WEALTH AND INCOME

reason that it is not wealth alone, but a combination of wealth and labor, that produces the economic goods of which income is composed. In some instances, as, for example, in the manufacture of machine-made goods, the combination consists of much wealth and little labor; but sometimes, as in the case of the non-material goods produced by the lawyer or physician, much labor and little wealth are used.

The central part of our diagram shows, under the heading "Income," the personal services, *new* consumers' goods, and *new* capital that have come into existence in the course of the year. Income consists of this *flow* of new economic goods, material and non-material, which have been produced during this year by labor used in combination with land and capital—plus, of course, the services yielded by *old* consumers' goods held over from the previous year.

Personal services and the services of old consumers' goods are short-lived. Though their effects may endure, the services themselves do not. But the new consumers' goods and new capital produced in any given year are unlikely to be wholly used up in that period of time. Hence we have indicated, by the shaded sections of that part of the diagram that appears as "Wealth (Dec. 31)," the addition of sufficient new capital and consumers' goods not only to replace the wealth of these kinds that was used up during the year, but to give society on December 31 a net increase in wealth as compared with its stock of such goods twelve months earlier. Strictly speaking, the quantity of land has been *reduced* somewhat during this period, because coal, iron ore, petroleum, and other natural resources have been turned into capital or consumers' goods in the course of the year. But in an expanding economy, there is a net gain in wealth; the volume of production may be expected annually to exceed the volume of consumption, with a consequent increase in total wealth (in terms of physical goods, but not necessarily in monetary terms) year by year.

Production is the creation of utility.

Utility is that relationship of a good to a human being which is expressed by saying that the good is desired by the human being. ("Utility" is synonymous with "wantedness" and "desiredness.")

Land is natural resources created without the assistance of labor.

Labor is human energy expended for the purpose of acquiring income.

Capital (or *producers' goods*) is produced goods intended for further production.

A business enterpriser is a person that assumes the ownership and hence the risks of a business.

1. Define "production" and "utility."
2. How can we determine whether a given member of society is a "producer"?
3. List the several types of utility created by economic workers, and give illustrations (not taken from the text) of each type.
4. On what basis may we classify, as creators of specific types of utility, such workers as bookkeepers, typists, office boys, accountants, and janitors, who may be found in businesses of all kinds?

5. Some business men speak of their manual laborers and machine operators as "producers," but refer to the office force as "nonproducers." Is the designation a sound one from the point of view of the definition in the text? Why or why not?
6. What is the annual expenditure for newspaper advertising in the United States?
7. What is "combative" advertising? Illustrate with an example not cited in the text.
8. Name some form of economic activity which might seem to fit into at least two of the five classifications of utility.
9. Land has been called "the starting-point of all production." Defend or attack this characterization.
10. What is the land area of the United States, and to what extent is it used for agriculture?
11. Define "labor."
12. Compare the dictionary definition of a "professional" with the economic concept of a "laborer."
13. How many "laborers" are there in the United States, and how are they distributed numerically among the general fields of economic endeavor?
14. Distinguish between "land" and "capital."
15. "Capital" is sometimes called "producers' goods." Do you consider this an appropriate term? Why or why not?
16. What is the socialist attitude toward the ownership of capital?
17. Distinguish between "laborer" and "business enterpriser."
18. Describe the function performed by the business enterpriser.
19. What is the estimated number of business enterprisers in the United States?
20. What is the chief difference between "direct" and "indirect" production?
21. Give examples (not taken from the text) of direct and indirect production.
22. In what two important ways does society benefit from the use of the indirect process of production?
23. Explain the manner in which "capital" is accumulated.
24. Of what does "capital" consist? Is money "capital"? Explain.
25. How may a person become a "capitalist" in modern economic life?
26. Study Fig. 3, and be prepared to explain how it illustrates the fundamental nature of the phenomena that constitute man's efforts to satisfy his wants by utilizing the scarce means provided by nature.

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The Principle of Diminishing Returns

NOT ONLY MUST LAND, LABOR, AND CAPITAL BE BROUGHT TOGETHER AND formed into a going machine, but they must be employed in the proper proportions if production is to be efficient and therefore economical. Unless they are so employed, the maximum product that might be had through the use of a given quantity of land, labor, and capital will not be attained.

THE LAW OF DIMINISHING RETURNS

This fact has long been understood, but its full significance has not always been appreciated. The possibility of affecting the return from a given piece of land by varying the quantities of labor and capital that are employed on it, found early expression in the Law of Diminishing Returns which a famous economist, John Stuart Mill, called the "most important proposition in political economy."

Statement of the Law. The Law of Diminishing Returns is usually stated about as follows: "In a period during which there are no changes in the methods of production, if successive units of capital or labor (or both) are applied to a given quantity of land, then, after a certain point has been reached, each additional unit of these variable productive agents will add to the *total product* a smaller amount of product than was added by the preceding unit." The law is applicable to land of all kinds, but its workings may be seen most readily in agriculture, since here the productive agents are relatively simple and the product is easily measurable.

Diminishing Returns in Agriculture. An actual experiment in southeastern Kansas, conducted for the purpose of ascertaining the effects of varying applications of fertilizer in the growing of wheat, has provided data which contribute to an understanding of the principle of diminishing returns.¹ The results of the experiment are given in Table 1.

This table shows the effects of varying quantities of bone meal (which is *one* of the many forms of capital) when used in conjunction with *fixed*

¹ These data are taken from the *Yearbook* of the United States Department of Agriculture, 1926, p. 477.

quantities of other kinds of capital (such as seed and implements) and a *fixed* quantity of labor on a *fixed* quantity (one acre) of land. Under the conditions outlined, any changes that occur in the total product must, of necessity, be due to changes in the quantity of the variable factor, bone meal.²

Our figures show that each increase in the number of units of this factor has brought an increase in the *total product*. If no bone meal is used, the fixed quantity of other kinds of capital, plus labor, will produce 10.6 bushels of wheat on an acre of land. If one unit (30 pounds) of fertilizer is applied, the total product jumps to 14.9 bushels. The increase in product continues throughout the entire illustration, the greatest total product (20.2 bushels per acre) being obtainable with the application of 6 units (or 180 pounds) of bone meal.

TABLE 1. EFFECTS OF BONE MEAL UPON THE YIELD OF WHEAT IN SOUTHEASTERN KANSAS

Varying Quantities of Bone Meal (capital)	Total Product (bushels)	Marginal Product (bushels)	Value of Marginal Product at		
			\$1.00	\$1.20	\$1.40
No bone meal used.....	10.6	.....	.....	.....	.....
1 unit (total 30 lbs.) used.....	14.9	4.3	\$4.30	\$5.16	\$6.02
2 units (total 60 lbs.) used.....	17.3	2.4	2.40	2.88	3.36
3 units (total 90 lbs.) used.....	18.7	1.4	1.40	1.68	1.96
4 units (total 120 lbs.) used.....	19.5	.8	.80	.96	1.12
5 units (total 150 lbs.) used.....	19.9	.4	.40	.48	.56
6 units (total 180 lbs.) used.....	20.2	.3	.30	.36	.42

It is difficult to state the Law of Diminishing Returns simply and yet clearly, and it sometimes happens that the conditional clause—"if successive units of capital or labor (or both) are applied to land"—gives students the impression that the enterpriser applies first one unit, then another, then a third, and so on. Certainly this is not the sort of thing that ordinarily occurs in farming or any other economic process. A producer of wheat would know from actual experience, or perhaps from experiments carried on by agriculture experimental stations, approximately how much bone meal to apply, and he would apply it all at once and not in a half-dozen successive doses. Table 1 should be read, then, as a series of statements of *what would happen if the several conditions there set forth were met*. What the experiment proved, and what the table says, is that, with the given combination of land, labor, and capital other than

² Although, in order to get uniform weather conditions, an experiment of this kind must be conducted on several separate acres of similar land (each with a different quantity of the variable factor), the results may properly be said to indicate (as is shown in the table) the effects of varying applications of fertilizer on a single acre of land.

bone meal, the enterpriser would get 10.6 bushels of wheat from his acre; if to this combination he should add one unit (30 pounds) of bone meal, he would get 14.9 bushels, instead of 10.6 bushels; if he should use 2 units (a total of 60 pounds) of bone meal, he would get 17.3 bushels of wheat instead of the 14.9 bushels that he would have had with the use of but one unit of bone meal; and so on.

The Point of Diminishing Returns. The third column of the table (giving *marginal product*, in bushels) shows clearly that, though the total product makes a steady increase, this increase, "after a certain point has been reached," is at a *diminishing rate*. If no fertilizer at all is used, the total product is 10.6 bushels and if one unit (30 pounds) is applied, the total product is increased by 4.3 bushels. This increase, because it represents a difference in the total product brought about by the use of a single, or "marginal," unit of the variable agent of production, is called the "marginal product." The use of a second unit of the variable agent brings, it will be observed, a marginal product of only 2.4 bushels; and the gains through the employment of third, fourth, fifth, and sixth units are still more discouraging, the use of the final (or sixth) unit resulting in a total product only three-tenths of a bushel greater than if this unit had not been employed.

The question now arises as to the exact position of the "certain point" to which reference has been made. In our illustration, the point in question is that at which the first unit of the variable agent has been applied, for this is the point beyond which further units of the agent cannot be employed without a decline taking place in the marginal product. Of course, the point of diminishing returns will not always coincide with the first application of the variable factors, but it will inevitably be that point in the productive process *beyond which* "each additional unit of these productive agents will add to the total product a smaller amount of product than was added by the preceding unit." That is, it will always be *the point at which the marginal product is at its maximum*.

It is entirely possible (though on this matter our illustration throws no light) that, *up to the point of diminishing returns*, each additional unit might bring a *greater* marginal product than was added by the preceding unit, or again, a yield *exactly equal* to the marginal product of the preceding unit. When results such as these are experienced, they are known as "increasing returns" and "proportional returns," respectively, but these two conditions need not occupy our attention further at this time.

A Note on "Product" and "Value." The Law of Diminishing Returns is certain to prove confusing unless the student keeps steadily in mind the fact that the "product" referred to in the statement of the law is *physical product*, and not the *value* of that product as expressed in price. Therefore, the point of diminishing returns does not necessarily indicate the point beyond which it is unprofitable to carry cultivation. Whether

it will pay the farmer to push cultivation beyond the point of diminishing returns depends upon his costs of production and the price at which the commodity in question is selling.

The Point of Most Profitable Use. The last three columns of Table 1 show the money value of the several increases in yield when wheat is bringing \$1.00, \$1.20, and \$1.40 a bushel, respectively. The estimated cost of each unit (30 pounds) of bone meal is 75 cents. With these figures before us, the money gains or losses that will be experienced through the use of more or fewer units of this variable factor may be easily calculated.

Our farmer will naturally continue to apply bone meal as long as the money return for the marginal product is greater than the outlay for additional fertilizer, but he will certainly do his best to stop before the marginal product is so slight as to bring in a smaller revenue than the cost of a unit of bone meal. If wheat is selling at \$1.00 a bushel, it will pay him to use four units, for the use of the fourth unit is followed by a marginal product amounting to eight-tenths of a bushel, which will sell for 80 cents, while the fertilizer costs but 75 cents. It will not pay, however, to use a fifth unit, since the extra cash return (for the extra four-tenths of a bushel) would mean a net loss of 35 cents.

An examination of the other two columns reveals the fact that the fourth unit is, in each instance, the last unit of bone meal that the intelligent farmer (in possession of all the necessary factors) would employ. If, however, the price of wheat were \$2.00 a bushel, it would pay to employ five units of fertilizer, since the marginal product of the fifth unit would then sell for 80 cents, with a net gain of 5 cents.³

In Table 2, in which wheat is assumed to be selling at \$1.00 a bushel, the point of most profitable use is shown with particular clarity. By subtracting the total cost of the bone meal from the amount received from the sale of the total product, we may ascertain, at each stage of our illustration, how much of the total receipts remains available to pay for the other agents of production (land, labor, and capital other than bone meal) used in the raising of wheat. Since, in our example, *these other agents are exactly the same in all seven phases of the experiment*, the point of most profitable use is bound to be the point at which the amount available for remunerating these agents is greatest. The table shows that this amount is greatest when four units of bone meal are used. Hence, the point of most profitable use is the point at which four units of bone meal are employed, when the cost of bone meal is 75 cents a unit and the price of wheat is \$1.00 a bushel. Of course, a change in either of these items might shift the point of most profitable use.

³In these calculations no allowance has been made for increased cost in harvesting and marketing the extra yields of wheat. But the cost in the case of a crop of this kind is a small one.

Exhaustion of Soil Fertility. It must be emphasized that the diminishing returns we have been discussing are not the result of exhaustion of the fertility of the soil. It is true that, if the chemical elements necessary to plant growth (nitrogen, phosphorus, and so on) are not returned to the soil from year to year, the fertility will gradually be exhausted and the land will produce in successive years smaller and yet smaller crops. But this decline in yield must be charged to unscientific use of the land—amounting, in effect, to *mining* instead of *farming* the soil—and not to the operation of the principle of diminishing returns. The experiment we have used for illustrative purposes takes no account of whether the soil is rich or poor. The Law of Diminishing Returns is applicable to land of *any given degree of fertility*.

TABLE 2. THE POINT OF MOST PROFITABLE USE IN THE EMPLOYMENT OF BONE MEAL IN WHEAT PRODUCTION

(Based upon data in Table 1)

Units of Bone Meal	With Wheat at \$1.00 per Bushel		Total Cost of Bone Meal, at 75 Cents per Bushel	Total Amount Available to Pay Productive Agents Other than Bone Meal
	Total Products	Total Receipts		
0.....	10.6 bu.	\$10.60	\$0.00	\$10.60
1.....	14.9 bu.	14.90	0.75	14.15
2.....	17.3 bu.	17.30	1.50	15.80
3.....	18.7 bu.	18.70	2.25	16.45
4.....	19.5 bu.	19.50	3.00	16.50
5.....	19.9 bu.	19.90	3.75	16.15
6.....	20.2 bu.	20.20	4.50	15.70

We may remark, parenthetically, that ignorance is no excuse nowadays for permitting impoverishment of the soil through lack of replenishment of the necessary plant food. A farmer may now have his soil analyzed, and thus discover in what properties it is deficient. If, then, he allows his farm to “run down,” he is no more deserving of sympathy than is the manufacturer who fails to make provision for the replacement of factory machinery as it wears out.

Influences Counteracting Diminishing Returns. Toward the end of the eighteenth century, and early in the nineteenth, Thomas Robert Malthus, an English clergyman, wrote a series of essays dealing with economic problems. In these essays he pointed out that a serious situation might eventually arise by reason of (1) the tendency of population to multiply rapidly, and (2) the resistance of nature to man’s attempts to increase indefinitely the agricultural product to be had from a given amount of land.⁴

⁴ Malthus did not mention specifically the principle of diminishing returns, but his doctrine appears to have been based on this principle.

In other words, Malthus saw, as he thought, that there was taking place a much more rapid increase in population than in the means of subsistence (by which he meant, primarily, foodstuff); and he indicated that, because of the discrepancy between the two, a clash was inevitable unless measures were adopted to avoid it.

But we find that overpopulation, in the sense of numbers too great for the available food supply, has not been experienced by the world as a whole. And because the world population is now greater than ever before, and yet food *per capita* is more abundant than at any time in the past, some persons have supposed that the Law of Diminishing Returns has been disproved. This supposition is false, and arises from a misinterpretation of the law. For the law has, as one of its conditions, no change in the methods of production; and agriculture, as we know, has taken tremendous strides in the past century and a half. Moreover, men have not confined their activities to fixed quantities of land, but have spread throughout the world and have brought under cultivation great stretches of new agricultural land. Finally, the rate of increase of population, which gave Malthus cause for alarm, has declined appreciably in recent years.

Discarding now the references of Malthus to increase in population, and considering only the question of diminishing returns, we may say that if thus far the tendency toward diminishing returns has seemed to have no significance as a world problem, it is because of certain counteracting influences, such as developments in methods of agriculture and the possibility of spreading out over new areas of land. Counteracting forces of these kinds have unquestionably served to offset some of the effects of the Law of Diminishing Returns, but this does not mean that the principle of diminishing returns has not been operating all the while.

Though the introduction of improved methods of farming has brought a larger yield per acre for a given expenditure of human effort and capital, even the most scientific agricultural methods will not enable a farmer indefinitely to apply labor and capital to a field without experiencing diminishing returns. Farmers know from experience that diminishing returns result from excessive applications of labor or capital, or of labor and capital, to a given quantity of land, and, noting the decline in marginal product as more and more units of the variable factors are applied, they seek to avoid diminishing returns by increasing the acreage under cultivation.

The fact that diminishing returns have not yet resulted in great deprivation and suffering does not, then, in any sense invalidate the Law of Diminishing Returns. The law has been working right along, and its effects may be observed by an examination of *specific pieces* of land. Indeed, the experiment described in Table 1 serves to show concretely, and not merely theoretically, the way in which the Law of Diminishing Returns actually works on a given piece of land. The influence of this

principle upon the actions of individual farmers is apparent, for diminishing returns have caused them in many instances to adopt extensive instead of intensive methods of cultivation. And the importance of diminishing returns as a world problem will become evident whenever (should such a time come) we have reached a fixed state in agricultural knowledge and practice, and at the same time are compelled to limit agricultural activities to a fixed quantity of land; in a word, whenever the conditions laid down in the Law of Diminishing Returns apply throughout the world.

The Variable Factor or Factors. In an earlier paragraph, reference was made to several kinds of capital that might be used in the growing of wheat. Of the three kinds mentioned (seed, implements, and fertilizer), fertilizer alone has thus far been considered as a variable. This, indeed, was the only variable factor that was employed in the actual experiment, and through the application of varying quantities of this one factor the practical importance of the Law of Diminishing Returns was demonstrated.

But it will readily be seen that seed or implements might have been used in place of bone meal as the variable factor; or any two, or all three, of these different types of capital could have been employed in the experiment, and in each instance diminishing returns would have been experienced. Seed, of course, is an essential in the production of agricultural crops, but if seed should be applied to a given plot of land in steadily increasing quantities, a point would eventually be reached beyond which each bushel of seed, while adding something to the total product, would not be so effective in increasing the total product as was the preceding bushel. This is true also of the employment of successive units of farming implements, or machinery; and, likewise, of capital *as a whole*.

If the quantity of labor, instead of capital, should be increased unit by unit, the result would be similar in nature to that brought about by varying the quantities of capital. The Law of Diminishing Returns describes, therefore, the effects of increasing applications of capital *or* labor. And it describes equally well the effects of increasing applications of capital *and* labor; for if *both* of these factors should be made variable, land alone remaining fixed in quantity, diminishing returns would inevitably set in after a certain point had been reached in the use of the variable factors. We shall not take the time that would be required to trace through, step by step, each of these possibilities. The skeptical reader may do this for himself.

Possibility of Negative Returns. It is conceivable that the variable factors might be used in such exceedingly large quantities that even the *total product*, and not only the *marginal product*, would decline. Seed might be sown to so great an extent as to crowd the stalks of wheat and interfere with proper heading and ripening. Fertilizer might be used in excess, and the plant life be "burnt out" as a consequence. Workers might be em-

ployed in such large numbers as to trample the crop underfoot, and so on. The question is a purely academic one, of course, since it is extremely unlikely that a farmer would be so foolish as to continue to apply expensive agents of production if their addition brought a smaller total return than their cost. But our illustration shows how the *positive increases* tend to become progressively smaller, and may even be turned into *negative increases*, or positive losses.

Diminishing Returns on Building Sites. In the construction of buildings, as in agriculture, there is a tendency toward diminishing returns.⁵ Modern methods of construction make it physically possible to erect buildings reaching 150 stories, but this does not mean that it is economically feasible to do so. To begin with, a tall building must have a more substantial foundation than a low one. Moreover, larger quantities of the agents of production, or agents of better quality, must be used in building a high story of a skyscraper than in building a lower story. If the sixtieth floor of a building contains offices duplicating exactly, in number and arrangement, those on the fifty-ninth floor, the chances are that it presents an illustration of the principle of diminishing returns, since more or better capital and labor are required in constructing the sixtieth story than in constructing the fifty-ninth. For example, the higher in the air a builder goes, the greater is his outlay—in terms of capital and labor—for hoisting the building materials to the level on which they are to be used. That is equivalent to saying that the marginal product *per unit of capital and labor* declines after a time.

Diminishing returns may be observed also in the *operation* of a great office building, once it is ready for occupancy. The taller the structure, the greater the amount of capital and labor required for elevator service, for heating the building, and so on. It is safe to say, therefore, that in the use of land for building purposes the principle of diminishing returns begins to operate after a certain point has been reached.

We shall not be able to determine the exact point of diminishing returns in our consideration of building sites, as we could when dealing with agricultural land. In agriculture the units of product (such as bushels of wheat) produced on a piece of land are alike and may readily be measured. But no two rooms in an office building are identical, even though they are exactly alike in size and other physical aspects; for no two offices can have precisely the same location, and location is, in this instance, a very important factor. Consequently, though we may easily measure bushels of grain, it is not possible to measure, with any great

⁵ As will be explained in our treatment of variable proportions, which appears later in the chapter, diminishing returns occur (after a certain point has been reached) whenever varying quantities of *any* agent or agents of production are used in combination with fixed quantities of *any* agent; and they are found not only in agriculture and the construction of buildings, but also in mining, fishing, lumbering, merchandising, transportation, manufacturing, and, in short, in all forms of economic activity.

degree of accuracy, the *units of convenience* afforded by a building of one kind or another.

But though we cannot locate, in the case of building land, the definite point of diminishing returns, we may say with assurance that such a point does exist. Diminishing returns relate, as we have seen, to physical product, but decreases in the amounts of the successive increments of agricultural product are reflected in the progressively smaller values of these successive increments. After a time, the value of the increment obtainable through the use of additional units of the variable factors becomes so slight that it seems unwise to make further applications. The point of most profitable use has now been reached; and there is no reason to believe that this point can be reached until the point of diminishing returns has also been reached, and probably has been passed.

Most Profitable Use of Building Sites. In the use of building sites, as in agriculture, there is a point of most profitable use. When, in the use of building land, there comes a point beyond which the money return does not justify the money expenditure, the point of most profitable use has been reached.

Business men, of course, are interested primarily in the point of most profitable use, and we may note, in this connection, a specific instance of such interest. Some years ago, the American Institute of Steel Construction made a study, covering a period of two years, which was undertaken with the hope of determining the most economical height of buildings. "Plans for eight buildings of varying heights were drawn and estimates of income, operating expenses and construction and land costs were made. The net return on a fifteen-story building was 6.43 per cent; on a twenty-two-story structure, 7.75 per cent; thirty-story, 8.50 per cent; thirty-seven-story, 9.07 per cent; fifty-story, 9.87 per cent; sixty-three-story, 10.25 per cent, and on a seventy-five-story building the return began its decline, going down to 10.06 per cent. These estimates were based on structures constructed on land valued at \$200 a square foot."⁶

The point of most profitable use varies, naturally, with the price of land, which is a reflection of its relative scarcity. Though a building sixty-three stories in height was found to be the most economical when land was worth \$200 a square foot, the maximum return came from a seventy-five-story building on land worth \$400 a square foot. The study showed that, with land at this latter figure, the net return from a building disappeared entirely when 131 stories were reached.

THE LAW OF VARIABLE PROPORTIONS

To the earlier economists the phenomenon of diminishing returns appeared to relate only to land. It remained for later students of economics to

⁶From *The New York Times*, September 22, 1929.

show that the principle has a much wider application than was originally supposed. It is now recognized that labor and capital, as well as land, are subject to diminishing returns, and the economic statement setting forth this fact is known as the Law of Variable Proportions.⁷

Statement of the Law. Following is a statement of the Law of Variable Proportions: "In a period during which there are no changes in the methods of production, if successive units of one or more productive factors are used in conjunction with a given quantity of any other factor, then, after a certain point has been reached, each additional unit of the variable factor or factors will add to the *total product* a smaller amount of product than was added by the preceding unit."

This law is in fact merely an extension of the Law of Diminishing Returns, and it says, in effect, that if variable quantities of land and labor are used in combination with a fixed amount of capital, or variable quantities of land and capital are employed with a given amount of labor, then diminishing returns will eventually appear just as they appear in the case of long-continued applications of capital and labor to a fixed quantity of land.

The Effects of Changed Proportions. Once the Law of Diminishing Returns is thoroughly understood, it becomes evident that diminishing returns are attributable to changes in the proportions of the several productive agents which occur whenever an addition is made to the quantity of the variable factors in use. Now these proportions change no less certainly when either capital or labor is the fixed factor, than when the quantity of land remains unaltered. If one productive agent is very scarce and therefore expensive, and, as a consequence, the more plentiful factors are used in increasingly large amounts while the scarce agent is held constant, the proportion of each factor to the other factor has obviously been changed. The inevitable result, after a certain point has been reached, is diminishing returns. We have seen how this change in the proportions of the agents acts when land is the scarce factor, bringing an increase in product *per unit of land*, but a decrease per marginal unit of capital and labor, the more abundant factors.

Variable Proportions in Agriculture. If capital is the scarce or fixed factor, and increasing quantities of land and labor are used in connection with it, then, after a time, diminishing returns will again be experienced, with the product *per unit of capital* steadily increasing (since *total product* increases while capital remains constant), but the marginal product per unit of land and labor diminishing. Hence, if land and labor (being abundant) are cheap, and capital (being scarce) is expensive, a farmer

⁷ It is called, also, the Law of Diminishing Productivity and the Law of Proportionality. The latter name is that favored by Professor Carver, who has described the principle and its application at considerable length. See T. N. Carver, *The Distribution of Wealth*, New York, The Macmillan Company, 1913, chap. 2; also, by the same author, *Essays in Social Justice*, chap. 7.

might find it profitable to use more and more land and labor in connection with a fixed quantity of capital.

This would mean, in the case of a corn crop, planting more acres in corn but cultivating less often with machinery, since farming implements (being capital) would be definitely limited in quantity and if employed on both old and new fields could not be used on each acre so intensively as before. An abundance of hand labor for seeding, stone-picking, and so on, would help to overcome the shortage of capital; but the arrangement would certainly in time bring diminishing returns *per marginal unit of land and labor*, though an increase in total product. If the variable factors were sufficiently cheap, it might pay the farmer to carry cultivation far beyond the point of diminishing returns.

In like manner, if labor were very scarce and land and capital were abundant, it might easily pay the agricultural enterpriser to change the proportions of his business arrangement, economizing on labor and being more generous in the use of acres and machinery. This policy likewise would lead to diminishing returns, with only a small return in marginal product for each additional unit of land and capital employed, but it would result in a greater return per unit of labor, the scarce factor. Agriculture of this type is common in the so-called "corn belt" and "wheat belt" of the United States, where a few farm hands, with the most modern agricultural machinery, cultivate hundreds and even thousands of acres of land.

Variable Proportions in Manufacture. The possibilities of using variable proportions might be shown in almost any form of business enterprise, but one further illustration, taken from the field of manufacturing, will be sufficient for our purposes.

We have already seen that, in the case of an office building, the use of additional quantities of labor and capital on a fixed amount of land brings diminishing returns. This is true also in factory construction, since here, as in the case of office buildings, increased height renders the use of additional units of labor and capital progressively less productive than the former units, after a certain point has been reached. Here, then, is an instance of diminishing returns in manufacture, when land is the scarce factor and is therefore used in limited quantity.

But if land and labor are both plentiful, while there is a scarcity of capital, the intelligent manufacturer will employ capital sparingly and at the same time will use large quantities of the other factors. Under these circumstances, the factory building may be made to cover a large area, but reach the height of only a floor or two, instead of three or four. Workers, too, will probably be hired in large numbers to assist those who are operating machines and using tools, so that all capital may be made to perform maximum service. The result will be a large product *per unit of capital*, but diminishing returns as regards one or both of the other factors.

The manufacturer, like the farmer, will economize in the use of workers if labor chances to be the scarce factor. This condition would indicate the desirability, from the point of view of *net financial return*, of employing large quantities of capital and spreading out over a considerable amount of land. This would mean, of course, the use of the latest and best labor-saving devices, so that a very little of the expensive factor, labor, could be made to go a long way in the manufacturing process. The effect of this arrangement of the productive factors would be a large product *per unit of labor*, but diminishing returns so far as units of land and capital are concerned.

An Example of Variable Proportions. Table 3 is a hypothetical illustration of the operation of the Law of Variable Proportions. In this example, the quantity of labor and capital is assumed to be fixed. The table indi-

TABLE 3. EFFECTS OF USING VARYING QUANTITIES OF LAND IN COMBINATION WITH A FIXED QUANTITY OF LABOR AND CAPITAL

Number of Combination	Units of Land	Units of Labor and Capital	Total Product (bushels)	Marginal Product (bushels)
1	4	10	50	
2	5	10	65	15
3	6	10	85	20
4	7	10	102	17
5	8	10	117	15
6	9	10	130	13
7	10	10	139	9

cates the total and marginal products which accompany the use of varying quantities of land in connection with the fixed quantity of labor and capital.

In this table, the point of diminishing returns in the use of land is, of course, at Combination No. 3, since that combination yields the largest marginal product. The point of most profitable use may be calculated quite as easily here as in Table 1, provided the rental price of land and the selling price of the product are known. If these prices are \$15 an acre and \$1.00 a bushel, respectively, the point of most profitable use will be at Combination No. 5, since that is the point at which the cost of a unit of the variable agent is precisely equal to the return realized from the sale of the marginal product.

DIMINISHING RETURNS AND COSTS OF PRODUCTION

The Law of Variable Proportions, as we have seen, is simply an extension of the Law of Diminishing Returns. It points out that diminishing re-

turns may occur whenever there is a "fixed" factor of production, whether that factor is land, labor, or capital.

The Element of Scarcity. In describing the workings of diminishing returns, we have sought to emphasize the fact of scarcity, for it is only because of the limited quantity of certain productive agents that the phenomenon of diminishing returns has practical significance; and, moreover, it is only because of diminishing returns that the limited quantity of scarce productive agents is significant. If none of the factors of production were scarce, the business man would have no reason to economize in their use, and he would certainly not endure diminishing returns when he might easily avoid them by combining advantageously the equally abundant factors. But the truth of the matter is that all productive agents are sufficiently scarce to command a price, and some are at times so limited in quantity as to command a very high price.

The use of large quantities of expensive factors runs up the business man's costs of production, and these in turn are reflected in the prices that he charges for the commodities or services in question. It is a desire to keep down expenses that prompts the enterpriser to economize in the use of scarce, costly factors of production, while using the plentiful, cheap factors more liberally. Though this economy, if long practiced, results inevitably in diminishing returns, it may at the same time be "good business" on the part of the enterpriser. This fact is demonstrated conclusively in our example of wheat-growing, which showed that it sometimes pays to apply the plentiful, cheap agents of production to the scarce factor long after the point of diminishing returns has been passed. The stopping point for the business man is, of course, the point of most profitable use.

The Point of "Ideal Proportions." Every farm, factory, or store is a business unit, in the operation of which land, labor, and capital are employed in combination. It is the task of the enterpriser, first, to discover the proportions in which these productive agents may best be employed, and then to see to it that they are used in these proportions, and in no others. The object is to secure not the largest possible product per unit of land, per unit of labor, or per unit of capital, but the greatest total product in proportion to total costs of production. Progressive business men are seeking all the time to find the best possible (that is, most profitable) combinations of land, labor, and capital. There may arise, for example, the question as to whether to buy a new labor-saving machine and lay off workers, that is, increase the amount of capital and reduce the quantity of labor. Or, again, the problem may bear upon the proportion of capital to land. Is it better (the enterpriser may ask himself) to build high or low, using less land and more capital, or more land and less capital, as the case may be?

Questions such as these cannot be answered offhand. The most ad-

vantageous combination of the factors will depend upon their relative cost. Expensive agents will ordinarily be used sparingly; cheap factors will be employed with a freer hand. In the end, however, it will be most profitable to add units of each factor up to the point at which the contribution of each unit to the value of the total product will exactly equal the cost of the unit. For if, to quote Professor Carver, "by increasing any factor there would be added to the total product of the establishment more than enough to pay the cost of increasing that factor, obviously it would pay to increase it. Or if, by decreasing such a factor, more would be saved in its cost than would be lost in the diminution of the total product, it would pay to decrease it."⁸ The point of most profitable use in the utilization of a productive agent may be defined, then, as the point at which the contribution of each unit of the agent to the total product exactly equals the cost of the unit.

Strictly speaking, there is no gain for the enterpriser in the use of a unit of an agent of production for which he must pay exactly as much as he realizes from the sale of the marginal product that is added by the use of this unit. But, as Professor Carver has shown, the enterpriser cannot stop short of this point without foregoing some profit, however slight, which he might have had by proceeding a little further in the use of the factor; nor can he go beyond this point without incurring some loss which he might have avoided by stopping the use of the factor a trifle earlier in the process. Consequently, the point at which the cost of the unit exactly equals the additional return realized by its use—sometimes referred to by economists as "the point of indifference"—is the point to which the profit-seeking enterpriser, provided he knows his own best interests, aims to bring his use of the various factors of production.

Diminishing Returns and the Supply of Land. Diminishing returns have no significance apart from a scarcity of productive factors, and all of the factors of production are more or less scarce. It should be noted, however, that the characteristic of scarcity applies with particular force to land. Capital is added to continually through the savings of members of society, and the labor supply is being steadily increased by growth in population. But the supply of land is, in a very real sense, fixed, and in the very nature of things must forever remain fixed.

From the point of view of the business man this distinction is not particularly important. He thinks of land, as he thinks of labor or capital, as a productive agent for which he must pay a price which will enter, together with other expenses, into his costs of production. For the enterpriser, then, land is in precisely the same position as the other agents of production.

But for the student of economics, who looks at the situation from the social point of view, the absolute fixity of the quantity of land does make

⁸ *The Distribution of Wealth*, pp. 89, 90.

a difference. It has a distinct bearing upon the distribution of income, as will be indicated in a later chapter. And it may eventually prove to be the "limiting factor" in production, which will set a point beyond which world population cannot safely go. It was recognition of the inability of man to increase the supply of land that caused Malthus to sound a note of warning, and led the earlier economists to regard diminishing returns as relating peculiarly to applications of units of labor and capital to a fixed quantity of land. It is this same scarcity of land that is today chiefly responsible for the interest manifested by economists and sociologists in so-called population problems, the most important of which is that of bringing about and maintaining such a relationship between numbers of people and land resources as will insure a high standard of living for all.

Law of Diminishing Returns: In a period during which there are no changes in the methods of production, if successive units of capital or labor (or both) are applied to a given quantity of land, then, after a certain point has been reached, each additional unit of these productive agents will add to the total product a smaller amount of product than was added by the preceding unit.

Law of Variable Proportions: In a period during which there are no changes in the methods of production, if successive units of one or more productive factors are used in conjunction with given quantities of any other factors, then, after a certain point has been reached, each additional unit of the variable factor or factors will add to the total product a smaller amount of product than was added by the preceding unit.

The *point of diminishing returns* in the utilization of a productive agent is the point beyond which further units of the agent cannot be employed without a decline taking place in the marginal product.

The *point of most profitable use* in the utilization of a productive agent is the point at which the contribution of a unit of the agent to the total product exactly equals the cost of the unit.

1. State the Law of Diminishing Returns.
2. How can we speak of "diminishing returns" when our illustration (see Table 1, "Total Product in Bushels") shows that the product is continually *increasing*?
3. What is the significance of the phrase, "after a certain point has been reached"?
4. What are "increasing returns" and "proportional returns"?
5. Distinguish carefully between "total product" and "marginal product."
6. "The successive increments to the total product *are at a diminishing rate.*" Explain the italicized phrase.
7. Does the Law of Diminishing Returns relate to *physical* product or to the *value* of that product?

8. What is the distinction between the point of diminishing returns and the point of most profitable use?
9. In Table 1 is it product *per unit of land* or *per unit of bone meal* that diminishes?
10. What relation does the exhaustion of soil fertility bear to the operation of the Law of Diminishing Returns?
11. What observations did Malthus make relative to population and foodstuffs, and to what conclusion did these observations lead him?
12. Since population has increased enormously in the past century, and yet food is *per capita* more abundant than ever before, is it correct to say that the Law of Diminishing Returns has been disproved? Explain.
13. Do you see any relationship between diminishing returns and the invasion of China by Japan? Explain.
14. Discuss the significance of diminishing returns in the light of probable great advances in scientific research.
15. The Law of Diminishing Returns describes the effects of the increasing applications of *capital or labor*, or of *capital and labor*, to a given piece of land. What is the significance of the italicized words?
16. Explain how "negative increases" might result from excessive applications of capital or labor (or both) to a plot of land.
17. Show that the Law of Diminishing Returns relates to building sites, giving an illustration.
18. Summarize the findings of the American Institute of Steel Construction relative to the most economical height of buildings.
19. State the Law of Variable Proportions.
20. It is sometimes said that the Law of Variable Proportions is simply an extension of the Law of Diminishing Returns. Do you think that there are good grounds for making such a statement? Explain.
21. Explain, by examples, how (a) a farmer, and (b) a manufacturer, might vary the proportions of the factors of production used in their respective enterprises.
22. What conditions might induce a business man to make changes in the proportions of various productive factors?
23. What has scarcity to do with the operation of the principle of diminishing returns?
24. How do diminishing returns affect the prices charged for goods? Explain.
25. What is Professor Carver's comment as to the most profitable combination of the factors of production?
26. In what way does the supply of land differ from the supply of capital and labor?
27. How does the business man's attitude toward "land" differ from that of the economist?

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The Organization of Production

THE BUSINESS ENTERPRISER IS THE PERSON, OR GROUP OF PERSONS, THAT OWNS a business and consequently assumes the responsibility for its operation. Directly or indirectly, the enterpriser determines the policies of the business, and in any event he bears the risks of the enterprise. He is, in many respects, the leader in the undertaking, and, if we may believe an observer who is well informed on managerial problems, "Wise leadership is more essential to successful operation than extensive organization or perfect equipment."¹ For the enterpriser, more than any other factor of production, is in a position to make or break the business, since his decisions may make the difference between success and failure.

The Function of Risk-Bearing. Though an enterpriser is an owner or part-owner of a *business*, he does not necessarily own all or any of the land, labor, and capital employed in the enterprise. However, he does undertake to pay rent, wages, and interest to the owners (who *may* include himself) of these several agents of production; and he takes the chance that he will be able to sell his product at a price sufficiently high to reimburse him for these payments. Primarily, then, the business enterpriser is a *risk-bearer*. He may, in addition, manage the business, in which event he (as an enterpriser) hires himself to manage his business, and pays himself *wages* just as he pays wages to his other employees. He may also own all or part of the land and capital used in the business, paying himself *rent* because he is a landlord, and *interest* because he is a capitalist. If the business is successful he receives a payment in the form of *profits*, because he is an enterpriser.

This may seem to be a somewhat artificial analysis, but it is highly important to distinguish clearly between the various *functions* performed by the owners of the several agents of production, and to realize that all of these functions *may* be performed by a single individual. This is particularly true of small businesses. In the field of agriculture, for example, the small-scale farmer is commonly enterpriser, landlord, laborer, and capitalist. But our present interest is in the enterpriser *as such*; and the point to be emphasized here is that every person who owns a business in whole or part is, by virtue of that fact, a business enterpriser, regardless

¹ L. P. Alford, *Laws of Management*, New York, Ronald Press Company, 1928, p. 49.

of whether or not he performs any other economic functions in the undertaking.

THE INDIVIDUAL PROPRIETORSHIP

Frequently the business enterpriser conducts his business "on his own," but quite as often, in our modern economic society, the form of business organization is a partnership or a corporation.

The *individual proprietor* is the person who undertakes, by himself, the responsibility of carrying on an enterprise. This form of organization is most common in small businesses which require only a limited amount of capital. The average farmer, as we have already noted, bears all the risks of his business, though there are some instances of farming carried on by partnerships or corporations.² Most professional men are individual proprietors; that is to say, they practice medicine, or law, or some other profession, without sharing the ownership of the enterprise with other persons. The corner grocer is not uncommonly an individual proprietor, although more and more the corporate form of organization is being adopted in this field of merchandising. There have been in the past and still are many manufacturers who are sole owners of their respective businesses, but these are usually, though not always, enterprisers on a relatively small scale. Ordinarily, the individual proprietor not only *owns* but *manages* his business.

Advantages of the One-Man Business. Certain advantages attach to this type of business organization. When a man is in business for himself, he is very likely to give his best efforts to the advancement of the enterprise. He gets pleasure from the knowledge that he is in business for himself, and enjoys as an enterpriser a freedom of action, and if successful a sense of achievement, not experienced by an employee. Indeed, it would not be difficult to find many individual proprietors, particularly among small shopkeepers and farmers, who could earn somewhat larger incomes by selling their services to employers who conduct larger units of business. But the independence that goes with being in business for oneself brings a satisfaction for which many men are willing to pay in the form of smaller income.

Objections to This Type of Organization. There are, on the other hand, certain disadvantages to this type of organization. The amount of capital an individual is able to get together for the operation of his business is sometimes very restricted; and it is not always possible for him to expand the enterprise as rapidly as he might like, because of

² An interesting account of a large farming project conducted under the corporate form of organization is given in Department Circular No. 351 of the United States Department of Agriculture, Washington, August, 1925. The circular is entitled *Centralized Management of a Large Corporate Estate Operated by Tenants in the Wheat Belt*, and is by Walter H. Baumgartel.

limited funds. Though an individual proprietor may be master of his trade or profession, there is a good deal to be said for specialization in management as well as in the physical operation of a plant. Two heads are often better than one, and the individual proprietor has to rely upon his own judgment (which may not always be sound), unless he decides to hire one or more experts to help him manage his business.

There is the further disadvantage of "unlimited liability." If the business should prove to be a failure and the claims of creditors be greater than the assets, the creditors would be entitled by law to force the sale of the enterpriser's personal property, as well as his business assets, in order to collect their just claims. The individual proprietor might, under these conditions, lose his home and whatever other physical possessions he happened to have.

THE PARTNERSHIP

A business partnership is an association of two or more individuals who join forces for the purpose of conducting business. This partnership is based upon a written, oral, or implied contract—usually, of course, the first of these—setting forth the terms upon which the partnership has been formed, the rights and responsibilities of the several partners, the division of profits, and other details. A partnership usually consists of but a few members, each of whom is selected for the particular contribution he is able to make to the organization. The partners are sometimes chosen with the idea of increasing the amount of capital which can be used to advantage in the business. In the partnership, as in the case of the individual proprietorship, there is the incentive to work hard for the success of the business, since the several partners in so doing are working at the same time for their own personal advantage.

Some Disadvantages of the Partnership. The partners usually, though not always, take an active part in the management of the enterprise, and receive salaries for their personal services, as well as a return on the funds which each has invested, and profits when the business prospers. Like the individual proprietor, they are subject to demands upon their personal fortunes in case of business failure, unless they have taken out a "limited" form of partnership, which serves as due warning to creditors that the liability of certain members of the partnership (though not of all members) is no greater than the amount which they have actually invested in the business. Each partner, then, with the exception of "limited" partners, is responsible for the actions of his business associates, and each is liable for the total indebtedness of the partnership and not merely for his proportionate share of such indebtedness.

A partnership is automatically dissolved upon the death of one of the contracting parties, and this fact is thought by some to be a serious

disadvantage, to which the corporation, as we shall see, is not subject. There is the further disadvantage that partners may fail to agree upon policies to be adopted by the concern, whereas an individual proprietor suffers no handicap of this kind. Or, again, the partners may not be able to reach their decisions in important matters as promptly as an individual proprietor; and delays in determining courses of action in business are sometimes disastrous.

Example of a Successful Partnership. The experience of the Colonial Printing Company, operating in a medium-sized Pennsylvania city, illustrates the possibilities of the partnership form of organization for a small business. It so happened that three young men who were working for a printing concern decided that they would like to go into business for themselves. The trio consisted of George J. Harness,³ the business manager of the older concern; James Sullivan, who had charge of the typesetters; and John Williams, an expert pressman. It will be noted that each of these men had a type of skill which made him valuable to the new business, for Mr. Harness was able to handle the office details of the new printing company, making estimates on printing jobs, taking care of the finances, and so on; Mr. Sullivan directed the work of setting up the various jobs in attractive type form; and Mr. Williams was able to see to it that the actual printing was well done.

In addition to these contributions to the organization, each of the three men was able to get together a small amount of money, so that the final result was an organization with sufficient capital and such types of ability as would enable the business to be conducted satisfactorily. The success of this concern, which now has some hundreds of employees, is evidence that the partnership form of business organization, if adopted intelligently, may be exceedingly advantageous.

THE CORPORATION

Most large concerns, and many small ones, have adopted the corporate form of business organization instead of that of the individual proprietorship or the partnership. "A corporation is an artificial person, created or authorized by the law for some particular purpose or purposes. . . . [The] members, or stockholders, are not the corporation. They compose it, but the corporation has a name, an entity, and an existence of its own, entirely apart and distinct from that of these members."⁴

Great Size of Some Corporations. The larger number of participants in ownership of the corporation, as compared with the individual proprietorship and the partnership, means ordinarily that much larger funds are

³ The illustration is genuine, though the names here used are fictitious.

⁴ Thomas Conyngton and Louis O. Bergh, *Business Law*, New York, Ronald Press Company, 1926, p. 231.

available in a corporation for the purchase of capital than in any other form of private business organization, so that an incorporated business may be conducted on a huge scale. The owners of the business are called stockholders, and in many instances the shares of stock are sold to the general public. Thus, through the purchase of one or more shares of stock, an individual may become part owner of the Standard Oil Company of New Jersey, the General Motors Corporation, or any of several thousand businesses organized on a corporate basis.

The largest railroad system in the United States is the Pennsylvania Railroad, the largest public utility is the American Telephone and Telegraph Company, and the largest industrial concern is the United States Steel Corporation. In the case of none of these giant corporations does any single stockholder own as much as one per cent of its outstanding stock. But these and other great businesses, organized on the corporate basis, have been able to sell their securities to large numbers of stockholders, and have thus collected enormous sums of money with which to buy equipment and carry on operations. The Pennsylvania Railroad, with approximately 218,000 stockholders, had in 1945 gross assets totaling more than two and three-quarter billion dollars. Corresponding figures for the American Telephone and Telegraph Company were 684,000 stockholders and three and a half billion dollars in assets; and for the United States Steel Corporation, 243,000 stockholders and about one and a half billions of assets.

Ready Transfer of Ownership and Limited Liability. The corporate form of organization not only brings together under a single management great quantities of capital (buildings, machinery, and other equipment), but also makes it easy for the average person to convert his surplus income into investments. The New York Stock Exchange, the New York Curb Exchange, and local exchanges in our large cities are organized to facilitate the purchase and sale of securities. The ease with which one may become a stockholder is matched only by the readiness with which he may sell his holdings and withdraw from the market if necessity arises; for shares of stock are readily transferable, and people can always be found ready to sell shares of a given stock if the price offered is high enough, and others ready to buy if the price is sufficiently low. The shares of different concerns vary greatly in price, so that shares may always be found to fit the purse of the would-be investor, even though he has only fifty or a hundred dollars to spend. Thus it is easy for those who could not finance a business themselves to go into business on a small scale by buying a part-ownership in a corporation through the purchase of shares of stock. And the savings of the many, gathered together in this way, plus the funds collected from larger investors, make it possible to build up gigantic business corporations.

A further advantage of the corporation is the fact that the liability of

the stockholders is limited to their actual investment in the business, so that there is no danger of the loss of other property belonging to a stockholder, through a failure of the corporation. In the case of national banks and some state banks, however, the stockholder was long held personally responsible not only to the extent of his original investment, but in addition to an amount equal to the par value of the bank stock in which he had invested. Of course, the purpose of this "double liability" was to protect the depositors who had intrusted their money to the banks for safekeeping. The stockholders were thus made responsible for the way in which the affairs of the bank were conducted; and if the directors of a bank (who, of course, were elected by the stockholders) indulged in unsound banking practices and the bank closed its doors, each stockholder had to pay the penalty for the unfortunate choice of directors by meeting an assessment equal—if so much was needed to pay off the depositors—to the amount of his holdings in bank stock.

In the hundreds of bank failures in the years following 1929, the double-liability provision was invoked in many cases, and sometimes it brought financial disaster to those who had bought bank stock with the feeling that of all possible investments nothing could be safer than stock in a national bank. Thus, the burden of bank failures was shifted from one group—the depositors—to another group—the stockholders—who often were but little better able to bear it, and who in many instances had never even heard of double liability or, having heard, had not been apprised of its seriousness. As for the more recent past and the future, the situation was changed by the provision in the Glass-Steagall Act of 1933, that "double liability of shareholders of national banks shall not apply to shares issued after the enactment of this Act."

Permanence of Corporate Existence. There is also the fact that the corporation continues to operate regardless of the survival of its individual members. A single stockholder, or a dozen stockholders for that matter, may die without affecting appreciably the progress of the corporation. Their holdings pass into the hands of other persons, but the business goes merrily on, undisturbed by the change in ownership. Indeed, as we have already seen, the ownership of shares in a corporation is ordinarily changing day by day, since its shares are being dealt in regularly in the "continuous market" that is provided by the organized stock exchanges. Another fact worth noting is the ability of the great corporation to secure the very highest type of managerial ability because, by reason of large resources and the volume of business that is being transacted, it is able to pay handsome salaries to exceptionally able men. Moreover, it is able to offer advancement in position and salary, which does much to retain these men as permanent members of the staff. Here is a type of permanence that is far more important than permanence of ownership.

The Bondholders. The corporation is financed by both bondholders and stockholders. The *bondholders* are those who have loaned funds to the corporation. In exchange they receive bonds; and these, in the case of mortgage bonds, have back of them, as security, the physical property of the corporation. On these bonds a definite rate of interest is guaranteed, and in the event of bankruptcy the holders of these bonds may have the property of the corporation sold in order to meet their demands. Their claims take precedence over the claims of stockholders, both in the payment of interest and in the return of principal. Mortgage bonds therefore have a high degree of security of investment, but on this very account the rate of return on the investment is likely to be rather low.

The Stockholders. The actual owners of the corporation are *stockholders*, and of these there are several kinds. We shall note, in our present treatment, only two classes of stockholders—those who have invested in preferred stock, and those who own common stock. The holders of preferred stock are promised a fixed return in the form of dividends, provided the earnings of the business permit the payment of dividends. This return, it should be noted, is not guaranteed, whereas the return to bondholders is definitely guaranteed so long as the corporation remains solvent. Preferred stockholders therefore have less security so far as both principal and income are concerned; but if the profits are large enough to make dividends possible, these stockholders are likely to receive a higher rate of return than the bondholders.

Control of the Corporation. Though preferred stockholders, like common stockholders, are owners of the business, they frequently do not have voting power. The holders of common stock, on the other hand, usually though not always do have a vote in the election of a board of directors. The common stockholders are not paid any return on their investment until bondholders and preferred stockholders have been taken care of. They take considerable risk, therefore, and when they do receive dividends these dividends are great or small depending upon the success of the business. It is correct to say of common stockholders that they have no definite assurance of dividends, but sometimes the return on their investments is large—much larger, indeed, than the return to bondholders or preferred stockholders in the same corporation.

The common stockholders ordinarily have a vote, as has already been indicated, but in comparatively recent years there have been large issues of stock which carries with it no voting privileges. The issuance of stock of this kind has been severely criticized by certain economists.⁵ The point is that the holders of non-voting stock are risking their money in an enterprise which, because they have no vote, they are powerless to

⁵ See, in this connection, William Z. Ripley, *Main Street and Wall Street*, Boston, Little, Brown & Company, 1927.

control. This arrangement places the control of some corporations in the hands of individuals who own considerably less than a majority of the stock.

The Delegation of Authority. The owners of the corporation—that is, the stockholders—delegate to the board of directors the right to determine how the business shall be conducted. This board is elected by the stockholders and is therefore responsible to them. In order to facilitate its work, the board of directors frequently acts through an executive committee. The executive committee, in turn, delegates authority to a general manager (who is often president of the corporation and chairman of the board of directors), under whom various departments of the business are managed, each, of course, with its respective executive in charge. In many instances the president is clothed with vast powers, and is permitted in emergencies to act without specific authorization from the board of directors. The separation of direct control from ownership is one of the outstanding characteristics of the corporation. In this respect it differs radically from the individual proprietorship and the partnership, in which there is usually a very close relationship between ownership and control.

Stock Dividends. Sometimes, when the condition of a corporation fully justifies the payment of cash dividends, stock dividends are issued in place of cash. A stock dividend consists of additional shares of stock issued without charge to those who are already stockholders, in proportion to their holdings at the time. This plan is frequently adopted in order that the earnings may remain in the business and go to purchase new buildings and other equipment, and thus increase the size of the business. Or it may be that old equipment has increased in value to such extent that new stock may properly be issued on the strength of this enhanced value. The United States Steel Corporation, for example, issued a 40 per cent stock dividend on all outstanding common stock some years ago. This meant that every person holding ten shares of common stock received without charge four additional shares.

Another reason for issuing stock dividends is to reduce the market price of the stock. The unencumbered assets (or net worth) of the corporation, divided by the number of shares of stock outstanding, gives the nominal value of a share of stock. When a stock is selling at \$500 per share, it is beyond the reach of many investors of modest means. But the price can be brought down to approximately \$250 by the simple process of declaring a 100 per cent stock dividend. Because the number of shares of stock has doubled, the price per share will decline to about half the former price. If those who control the corporation wish its shares to be dealt in actively, they can often stimulate activity by issuing a stock dividend and thus reducing the market price of shares.

The motives behind the issuance of stock dividends are not always ap-

parent, but it is safe to say that in some cases the purpose is to reap large profits without those large profits being noticed by the public. Let us suppose that a concern with outstanding stock amounting to \$500,000 is regularly making profits sufficiently large to justify a 20 per cent dividend on this stock. It may be deemed unwise to pay so large a dividend since it would almost certainly subject the corporation to criticism; but if, through the issuance of a stock dividend, the outstanding stock is increased to \$1,000,000 then these profits may be distributed with the appearance of paying only 10 per cent return to stockholders.

It would seem that, in this way, the public might be deluded into thinking that a corporation was making only a small profit when its profits in reality were excessive. If the corporation is enjoying the benefits of a protective tariff or other special privilege, it would be distinctly unwise to make public the fact that profits are large, since this knowledge might result in a lessening of the favors which the concern now enjoys. In the case of public utilities, such as railways, electric power companies, and other organizations whose rates are controlled by public commissions, the concealment of unusual profits might serve as a means of warding off adverse criticism and avoiding opposition to higher future rates. Indeed, the profits providing a good return on a reasonable capitalization might be made to appear abnormally low through the issuance of stock dividends, and this situation might easily be made the basis of a plea for an increase in rates.

Moreover, in some lines of business, the appearance of exceptionally high profits might invite unwelcome competition. In an attempt to discourage competition, profits may be made to seem smaller than they really are, by paying dividends partly in cash and partly in stock. Stock dividends possess these advantages if there is a desire to conceal profits: In the first place, stock dividends are but little understood, and consequently do not attract much attention from the general public; and, secondly, the existence of this additional stock makes it possible, in the future, to pass out large earnings while the stock seems to be paying only a normal return.

Possibility of Predatory Control. There is also, under the corporate form of organization, the possibility that small stockholders may suffer at the hands of unscrupulous owners of large blocks of stock. There have been instances of predatory control by a few large stockholders who succeeded in making the business appear so unprofitable that small stockholders, fearful that the concern was going to smash, were glad to sell out even at considerable loss. Later developments would show that the pessimistic rumors that had been set afloat were not justified, that the business was on a thoroughly sound and profitable basis, and that the small holders of stock had been sacrificed in order to make fortunes for those in control. Manipulation of this kind often endangers the interests

of those least able to bear financial loss, and may result in genuine hardship.

Loss of Employer-Employee Contacts. Another disadvantage of large corporations, which applies to large-scale production in general, is the loss of the personal touch between employers and employees. When business is conducted in small units, it is quite possible for the owner of a business to know personally many, if not all, of his employees. As the business grows and the number of workers increases, it becomes correspondingly difficult to keep track of the individual worker in the plant and to know something about his needs.

This is especially true in the corporate form of organization, since here the owners of the business are simply stockholders who are chiefly concerned with getting large returns on their investments. The average holder of New York Central Railroad stock knows very little about the wages of the railroad worker, or whether his conditions of employment generally are good or bad. In all probability the lot of mining laborers in some of our coal-mining centers would be promptly improved if the mine owners (holders of stock who live in comfort or luxury in distant cities) knew from personal contact about the miners' working and living conditions. It is true, then, that the corporate form of business enterprise has played a large part in bringing about the present impersonal nature of labor relations, which has sometimes resulted in both uneconomic and unsocial conditions.

Growth of the Corporate Form of Organization. In view of the increasing importance of the corporation in our business life, we may with profit examine some definite figures dealing with this particular point. Table 4 is taken from reports of the United States Department of Commerce, and the data found therein are consequently official. A study of this table shows the trend of the times in the matter of business organization, so far as the field of manufacturing is concerned. During the thirty-five years from 1904 to 1939 the proportion of manufacturing establishments conducted by individual proprietorships and partnerships decreased from 76.4 per cent to 48.3 per cent of the total for the United States. The number of wage earners employed by such business men declined from 29.4 per cent to 10.6 per cent of the total workers in manufacturing plants. In value of product turned out by establishments of this kind, there was a decrease from 26.3 per cent to 7.4 per cent; and, finally, in the amount of value added to the goods in process of manufacture, the importance of manufacturing concerns conducted by individual proprietorships and partnerships dropped from 28.1 per cent to 7.7 per cent.

The figures for manufacturing organized on the corporate basis have consistently shown increases. In number of establishments there has been an increase from 23.6 to 51.7 per cent. In wage earners, the 70.6 per cent of 1904 became 89.4 per cent in 1939. In 1904, the value of products

made by corporations was 73.7 per cent of the total value of products manufactured in the United States, but by 1939 it had reached 92.6 per cent. The value added by manufacture does not vary greatly from these latter figures; corporations were responsible for 71.9 per cent of this value in 1904, and 92.3 per cent in 1939. These figures show clearly that individual proprietorships and partnerships have declined greatly in this thirty-five-year period while corporations have pushed ahead.

Since, in the manufacturing plants of the United States, we now have under the corporate form of organization almost 90 per cent of the wage

TABLE 4. TYPE OF OWNERSHIP OF MANUFACTURING ESTABLISHMENTS IN THE UNITED STATES, CALENDAR YEARS 1904, 1909, 1919, 1929, AND 1939

(Source: Bureau of the Census, United States Department of Commerce)

Type of Ownership, and Year	Establishments		Wage Earners		Products		Added by Manufacture	
	Number	Per Cent of Total	Average Number	Per Cent of Total	Value (dollars)	Per Cent of Total	Value (dollars)	Per Cent of Total
Corporation:								
1904.....	51,097	23.6	3,862,698	70.6	10,904,069,307	73.7	4,526,055,153	71.9
1909.....	69,501	25.9	5,002,393	75.6	16,341,116,634	79.0	6,582,206,117	77.2
1919.....	91,517	31.5	7,875,133	86.6	54,744,392,855	87.7	21,817,546,565	87.0
1929.....	101,815	48.3	7,945,478	89.9	64,900,690,398	92.1	29,174,714,978	91.5
1939.....	95,187	51.7	7,050,684	89.4	52,660,808,652	92.6	22,789,594,409	92.3
Other Types:								
1904.....	165,083	76.4	1,605,685	29.4	3,889,833,256	26.3	1,767,639,600	28.1
1909.....	198,990	74.1	1,612,653	24.4	4,330,935,236	21.0	1,947,053,875	22.8
1919.....	198,588	68.4	1,221,239	13.4	7,673,685,918	12.3	3,224,151,925	13.0
1929.....	109,144	51.7	893,265	10.1	5,534,173,045	7.9	2,710,568,733	8.5
1939.....	89,043	48.3	835,883	10.6	4,182,216,148	7.4	1,893,343,710	7.7

earners, producing (in conjunction with land, capital, and management) slightly more than 90 per cent of our manufactured products, and adding to the raw material in the process of manufacture something more than 90 per cent of all value thus added in American manufacturing establishments, it is quite easy to see the popularity and tremendous significance of this form of business organization.

An examination of the fields of transportation, insurance, banking, and public utilities shows that the corporate form of organization predominates in all of these several lines of economic endeavor. The growth of the corporation has been slower in the field of merchandising, but the rapid development of great chains of grocery stores, drug stores, and five-and-ten-cent stores is quite in keeping with the corporate movement

in other fields. As we have already seen, agriculture alone, with its six million individual proprietors, is resisting successfully the advance of the corporate form of organization which has intrenched itself so firmly in most branches of American economic life.

The Corporation in Important Industries. The facts given above relate to production in general in the United States, but an examination of a number of individual industries shows that the large businesses in particular are usually conducted under corporate management. Doubtless the explanation, in many instances at least, lies in the facility with which the corporation can amass tremendous quantities of capital. Large-scale

TABLE 5. MANUFACTURING ESTABLISHMENTS UNDER CORPORATE OWNERSHIP IN TEN LARGE-SCALE INDUSTRIES, 1929 AND 1939

(Source: Bureau of the Census, United States Department of Commerce)

Industry	Total Number of Establishments		Operated by Corporations			
			Number		Per Cent of Total	
	1929	1939	1929	1939	1929	1939
Sugar refining.....	21	27	19	26	90.5	96.3
Boots and shoes, rubber.....	22	13	22	13	100.0	100.0
Non-ferrous metals, smelting and re- fining.....	75	63	75	62	100.0	98.4
Iron and steel, steel works, and roll- ing mills.....	486	417	475	411	97.9	98.6
Locomotives.....	16	15	13	13	81.2	86.7
Iron and steel, blast furnaces.....	105	81	105	80	100.0	98.9
Cars, electric and steam railroad.....	147	143	144	141	98.0	98.6
Cement.....	174	160	156	158	89.7	98.6
Coke and by-products.....	154	112	150	109	97.4	97.4
Tires and inner tubes.....	91	53	83	49	91.2	92.5

operations (the nature of which we shall discuss in Chapter 9) usually require large amounts of capital. The corporation is the type of business organization, which, aside from public ownership, is best fitted to accumulate capital in great quantities.

Consequently we find, in the ten industries listed in Table 5, a very pronounced preference for the corporate form of organization. In six of these industries more than 98 per cent of the establishments are under corporate ownership. In only one does the percentage of plants operated by corporations fall below 90 per cent. Moreover, a comparison of 1939 figures with those for 1929 shows that in no case has the percentage of concerns operating under corporate control suffered any appreciable de-

cline. So much for the importance of the corporation, as measured by the proportion of corporate-owned establishments in these large-scale industries.

If we take a larger view of industry, we discover that there are many lines of manufacture in which the percentage of plants controlled by corporations is quite low. But despite this fact, the corporations engaged in any given line of industry usually carry on most of the activity in that industry. Only 25 per cent of the cigar and cigarette plants in this country are corporate-owned, but these one-quarter produce more than 95 per cent of all cigars and cigarettes made here. Thirty-two per cent of all our flour-milling establishments are corporations, and they manufacture 90 per cent of the total output of the flour mills in the United States.

Not all of the data for manufacturing emphasize so strongly the predominance of the corporation in American industry, but the samples given are fairly typical. They help to explain the fact, already noted, that 92.6 per cent of the total output of manufacturing concerns in the country, as judged by value of product, is attributable to establishments operating under the corporate form of organization.

THE COOPERATIVE ASSOCIATION

Up to this point we have been examining business organization with particular reference to the question of ownership. We shall now give a little attention to the cooperative association and public ownership; and here, it will be noted, the emphasis is upon *purpose* rather than upon *ownership*. Individual proprietors, partnerships, and corporations operate chiefly for the purpose of making profits for the owners. Cooperative associations and public ownership aim to provide commodities or services at cost to all who are members of the cooperative or of the "public," as the case may be.

In some instances, it must be added, cooperative associations deal with the general public in addition to their own members. In their dealings with non-members, the cooperatives realize gains which, however, are not distributed among the members of the cooperatives but are used to instruct the public as to the benefits of cooperation. The present importance of cooperatives is but slight, in comparison with that of individual proprietorships, partnerships, and corporations; but they have gained sufficient headway in Europe (and, to a lesser degree, in this country) to justify a few pages of description at this point, and further treatment in our discussion (in Chapter 30) of consumption.

Theory of the Cooperative Society. The distinguishing feature of the cooperative organization is the democratic operation of an enterprise for the benefit of the members who transact business with the organiza-

tion. To insure democratic control, the cooperative grants but one vote to each member, regardless of his capital investment in the association, and frequently the capital holdings of members are limited by specific provisions of the by-laws. Since the association is conducted for the benefit of those who have direct business relations with it, the service performed by the cooperative is rendered at cost, each member paying for the service which he receives.

Form of the Cooperative. Some cooperative associations require so little operating capital that the membership fees of ten or twenty dollars meet their financial requirements. Others, again, purchase considerable equipment, and secure their funds by organizing as corporations and selling stock. In the former case, the organization is somewhat similar to a large partnership with, in some instances, a limited liability granted by law. When a charter is secured and stock sold, the cooperative is not unlike the usual corporation, except that it is not operated primarily as a profit-making enterprise. Indeed, in most instances, the dividends paid on cooperative stock are limited to a very moderate return (only slightly, if any, greater than the current rate of interest), with the definite purpose of avoiding the payment of what might be considered profits.

Scope of Operations. Cooperative associations have been least successful when operating in the field of production (the term being used here in its narrow sense, as referring to the creation of form utility). A number of attempts have been made to carry on manufacture or agriculture under the cooperative form of organization, but almost always with disastrous results. The reasons for failure seem to be, in most instances, the inability of the members of the association to find among their number persons able to perform efficiently the duties of management, and an unwillingness to bring in high-salaried executives from the outside.

The term "producers' cooperatives" is often heard, but in most cases it has been applied to societies that engage chiefly in the *marketing* of products. It is true that grain cooperatives may perform the service of storage as well as sale; dairying cooperatives may convert raw material into butter and cheese; and fruit growers' cooperatives sometimes operate canneries in order to make use of imperfect or undersized fruit. But these functions, as a rule, are incidental to the larger function of finding satisfactory markets for the goods and disposing of them at good prices.

"Consumers' cooperatives" are societies which aim to purchase collectively the goods which they need (groceries, hardware, clothing, and so on), so that they may secure the advantages of large-scale buying and avoid paying the "middleman's profit" which ordinarily goes to the retail merchant. In the field of finance, the building and loan association provides the most conspicuous example of cooperative action. By using the saving of members of an association, and adding to them by loans

made available through the financial standing of the organization, it is possible to supply funds for the ownership of homes by persons of moderate means, who would otherwise probably be obliged to live throughout their lives in rented quarters.

Extent of the Cooperative Movement. The cooperative movement has spread much more widely in European countries than in the United States. And yet, even in this country, the data relating to the movement make a brave showing. In 1944, there were in the United States 4285 cooperative distributing associations, 577 service cooperatives (providing housing, medical care, or burial service), 850 electricity associations, 5000 telephone associations, 9000 credit unions (or financing organizations), and 2000 insurance associations.⁶

The cooperative movement had its beginning in England in 1844, as a consumers' cooperative which had for its purpose the retail sale of merchandise. It has since spread into the wholesale field, and into manufacturing as well. "Consumers' cooperation can no longer be called an experiment," according to an eminent English economist. "In Great Britain at least it is a very well-tried and firmly established form of industrial organization. The goods sold by the retail societies reach one-third of the families in the country, and their value amounts to perhaps one-twentieth of the whole national income, about one-half of them being supplied by the wholesale societies, and about one-third being actually manufactured in the movement's own productive departments."⁷ Consumers' cooperatives have found much less favor in the United States, but even here it is estimated that retail stores owned cooperatively are doing many millions of dollars' worth of business annually. The building and loan associations, which stand out as an important agency for providing cooperative credit, now number at least 10,000 organizations and have (it is estimated) between 7,000,000 and 8,000,000 members. These associations play an important part in financing homes for those who can buy homes, if at all, only on the basis of small monthly payments stretching out over a decade or so.

Cooperative associations for marketing, purchasing, and financing, such as we described briefly, appear to have much to offer in the way of effecting economies and thus increasing the real incomes of their members. Their ability to compete with other agencies performing similar functions is an indication of effective and efficient operation. It is probable that we shall witness, in the future, a further development of the movement in this country.

⁶ *The Competition of Cooperatives with Other Forms of Business Enterprise*, House Report No. 1888, Washington, Government Printing Office, 1946, p. 26.

⁷ D. H. Robertson, *The Control of Industry*, New York, Harcourt, Brace & Company, Inc., 1932, p. 108.

PUBLIC OWNERSHIP

Public ownership has, in common with cooperation, the idea of conducting business for those directly concerned, rather than for a group of capitalists. "Those directly concerned" are usually, in the case of public ownership, most or at least a large part of the citizenry of the political unit in question. Public ownership is sometimes resorted to in order to insure that a certain necessary service, such as the carrying of mail, will be rendered properly; or, again, it is undertaken so that the public may be able to purchase a service at cost—that is, without profit to the enterprisers. In some few cases, public ownership is undertaken with the thought of securing revenue for the government, but instances of this kind are rare.

The term "government ownership" usually brings to mind the concept of the operation of a business enterprise on a national scale. The postal service is so vital to the welfare of a people that it is usually owned and operated by the national government. About 80 per cent of the railroads of the world are state-owned. Other phases of communication that have been taken over by some national governments are telegraph and telephone systems. Of these types of industry, only the postal service has been nationalized in the United States, though during World War I the railroads of the country were placed for a time under government control.

Experience in the United States. But on a smaller scale, public operation has found considerable expression in the United States. A fair number, though of course a pronounced minority, of municipalities have found it desirable to own and operate waterworks, gas and electric plants, street railways, and other forms of so-called public utilities. Many of our "public utilities" are owned by private corporations, with their activities regulated to some extent by public service commissions. A fairly recent development in the field is the inauguration of publicly owned "yardstick" power plants, whose costs of production, it is argued, will provide the basis on which to calculate a "fair price" to be charged by the privately owned power plants. An important experiment in public ownership was made possible by the passage of the Tennessee Valley Authority Act of 1933, the stated purpose of which was "to provide the generation and sale of power, to build dams, power plants, and transmission lines, to develop fertilizers, and, under the immediate direction of the President, to carry out a program of social and economic planning with the aim of promoting the social and economic welfare of the Tennessee Valley and of the Nation." The results of these and similar undertakings may well be far-reaching, and their success or failure will doubtless do much to advance or retard the march of public ownership in this country. Our public school system, with its 28,000,000 students, al-

most a million teachers, and an enormous capital investment, is of course one of our most striking examples of public ownership and operation.

It will be noted that publicly operated industries are frequently producers of services, and not of material goods to be consumed directly by the user. There are exceptions, of course. At times the industries are supported wholly through taxation, as is the case with our public schools, and the service is rendered free to all who wish to avail themselves of it. Again, prices are charged which will cover all or most of the cost of operation. In our postal service, for example, a profit is realized on the handling of sealed letters, but some kinds of mail matter (notably books, newspapers, and magazines) are carried at a loss. Any net deficit resulting from the operation of the United States Post Office is taken care of by appropriation, and ultimately comes out of funds that have been secured through taxation.

Public Ownership Throughout the World. Though individualism is decidedly more popular than collectivism in the United States, there has in recent years been a pronounced trend toward government ownership and control of economic activities in many parts of the world. The overthrow of the Conservatives by the British Labor Party in 1945 marked the beginning of a program of socialization of vital industries which is expected eventually to include about one-tenth of the economic life of England. "Its aim is not communism, or even 100 per cent socialism, but a sort of socialism in which basic industries are nationally owned, but in which free enterprise operates in most of the economic fabric of the nation and in which the ideals of political freedom are wedded to social security and well-being."⁸ Thus far the British have nationalized banking and coal mining; and road and rail transport, the electric and gas industries, and the manufacture of steel are soon to be transferred to state ownership. In reporting a survey of nineteen nations conducted by its correspondents, *The New York Times* recently said: "Canada appears to be the only one in which private enterprise can be said to be functioning today with anything like the freedom from government controls that obtains in the United States."⁹

Whether the development of public ownership and operation is desirable is a debatable question, and one that is being widely debated today. Its advocates have shown that it offers certain definite advantages (particularly as an alternative to widespread private monopolies), but, on the other hand, its opponents have demonstrated that it holds possibilities of grave abuse. The friends of public ownership point with approval to economic developments in Soviet Russia and England, while the champions of economic individualism view these same developments with apprehension, and dwell upon the glories of capitalist Russia under the czars

⁸ Raymond Daniell in *The New York Times*, Sec. 6, February 2, 1947.

⁹ *The New York Times*, March 3, 1947.

and of England in the pre-socialist days of Baldwin, Chamberlain, and Churchill. The truth of the matter is that we do not yet have sufficient scientific data upon which to base a sound appraisal of the relative merits of private and public ownership in a given industry, much less a considerable number of industries. If Britain should demonstrate that industrial nationalization can be extended without a loss in political or economic freedom for Englishmen as individuals, and with a gain in national and individual economic productivity, security, and stability, the example will doubtless influence the people of other nations. If, as her critics predict will be the case, Britain's experiment in nationalization should prove unworkable, its failure may be expected to lead to greater economic conservatism in some countries and more extreme economic radicalism in others.

1. "The enterpriser, more than any other factor of production, is in a position to make or break the business." Precisely why?
2. What is the "individual proprietorship," and where in the business world is it usually found?
3. What are the advantages of the one-man business?
4. In what ways is the "individual proprietorship" handicapped?
5. In what respects is a partnership superior to a one-man enterprise?
6. What is a "limited" partnership, and what are its advantages?
7. Define "corporation."
8. How do you account for the increasing popularity of the corporate form of business organization?
9. What is a "stock dividend"?
10. Why are stock dividends issued?
11. Discuss the possibility of predatory control of corporations.
12. How may the loss of employer-employee contacts result in uneconomic and unsocial conditions?
13. Show statistically the importance of the corporation in American industrial life.
14. Why are large-scale industries usually corporate-owned?
15. Pick out from Table 5 several items that appear to you to be especially significant. Give your reason for your choice.
16. "The corporations engaged in any given line of industry usually carry on most of the activity in that industry." Substantiate, with figures.
17. Contrast the *corporation* and the *cooperative* on the basis of desire for profits.
18. How does the organization of the cooperative assure democratic control?
19. How is the cooperative financed?
20. When cooperatives have failed, what appears usually to have been the cause of failure?
21. How do "producers' cooperatives" differ from "consumers' cooperatives"?
22. Give some concrete idea of the importance of the cooperative association in this country in agriculture, retailing, and finance.

23. What similarity is apparent in the cooperative association and public ownership?
24. What important industries have been nationalized in certain countries?
25. What is the attitude of the British Labor Party toward government ownership?

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Specialization in Production

ONE OF THE OUTSTANDING CHARACTERISTICS OF OUR PRESENT-DAY ECONOMIC society is specialization. Specialization, in the economic sense, is the division or differentiation of economic activities. Though it is difficult to find a community, however small or primitive, in which there is no division of economic functions, it is unquestionably true that specialization tends to increase with the growth of population.

SOME EXAMPLES OF SPECIALIZATION

Specialization in Merchandising. A simple example from the field of merchandising will show that this is the case. In parts of the country that are but slightly settled, goods of many kinds are sold in general merchandising stores. Here can be found food, tools, dry goods, furniture, and other types of goods likely to be demanded by the people of the neighborhood. Often these general merchants deal also in such articles as grains and fuel, buying grain from near-by farmers and selling them a supply of coal, in addition to the articles usually found in a country store. As population grows and villages and towns develop where formerly there have been only a crossroads and country store, we find new stores opening up, and specialization in selling begins to appear. The functions of the general merchant are split up, and some storekeepers undertake the sale of groceries, others of hardware, still others of dry goods, and so on.

With a still further increase in population, specialization in merchandising is carried forward another step. Instead of attempting, for example, to outfit an entire family with clothing, one merchant decides to confine his sales to men's wear, another to the sale of women's clothing, while a third specializes in shoes or some other single item of wearing apparel. In a more thickly populated area, such as a great city with several millions of inhabitants, there is a tendency toward still greater specialization. The shoe dealer, for example, is quite likely to specialize in either men's or women's shoes, rather than try to handle both.

Specialization in Manufacture. In manufacturing, as in merchandising, there is specialization. Indeed, a manufacturer seldom undertakes to produce a great variety of articles. The manufacturer of shoes does not make

hats, nor does the hat-maker produce underwear, hosiery, shirts, and clothing of other kinds. The manufacturer of automobiles is likely to confine his efforts to the production of motor vehicles, and to produce only a few models instead of a wide variety.

In the field of textiles, which form but one branch—though a very important branch—of manufacturing, we find a high degree of subdivision. Not only are there lines of demarcation between silk, woolen, and cotton manufacture, but within each of these divisions there are still further evidences of specialization. The manufacture of artificial silk, for example, is commonly separate and distinct from the manufacture of real silk. And in the field of artificial silk, the production of hosiery is conducted separately from the production of silk cloth. To note one further stage of specialization in this field, we may mention the fact that some manufacturers make only *tubular* hosiery, whereas others, with a different type of equipment, specialize in the production of *full-fashioned* hosiery. A similar inquiry into the manufacture of woolen and cotton goods would show that these industries, too, provide abundant examples of specialization.

Specialization in Agriculture. In agriculture, also, although to a lesser extent, there is specialization. It is quite true that many farmers carry on a general farming business, but there are also specialists in the field of agriculture. In the Middle West we find a "wheat belt" and a "corn belt," with emphasis upon the products indicated by these names. In certain parts of Washington and Oregon, agricultural specialization takes the form of apple-growing. In Florida and California we have specialized producers of oranges, and in many states of the South specialization takes the form of raising cotton. Thus, even a hurried survey of our economic system indicates that there is much specialization in the leading branches of industry; and this tendency is likely to increase with the further growth of population.

FORMS OF SPECIALIZATION

Specialization by Trade or Profession. Specialization of labor takes several forms. The simplest is specialization by *trade* or *profession*. Whenever a population is sufficiently large to justify certain workers in devoting their entire time to the pursuit of a particular trade, we are likely to find them concentrating their energies instead of engaging in several fields of activity. Thus, we have in modern times skilled artisans known as blacksmiths, bricklayers, machinists, cigarmakers, glass-blowers, paperhangers, structural steel workers, and so on. An examination of the rolls of organized labor shows that some millions of workers in the United States definitely regard themselves as destined to follow specialized trades throughout their working lives; and there are many unorganized workers who, equally

clearly, are tradesmen or craftsmen. In some of these trades an apprenticeship of several years is demanded of the beginner before he is accepted as a fully qualified member of the craft.

In the so-called learned professions we find a similar situation. The physician, the preacher, and the teacher—like the carpenter, the plasterer, and the hod carrier—are specialists. Indeed, in some of these professions, as for example in medicine, specialization is increasing all the time, though there is still room for the general practitioner. There is a distinct tendency for doctors to become specialists in the diagnosis and treatment of particular types of human ills. We have long had dentists and oculists, who really are simply specialists in the field of medicine. Nowadays, we have nose and throat specialists, stomach specialists, heart specialists, another group of specialists who deal with nervous and mental diseases, and so on.

Specialization by Task. Division of labor also takes the form of specialization by *task*. The skilled worker is no longer asked to make an article in its entirety. Many of the tasks which were formerly done by hand are now done by machinery. The trade of shoemaking, to mention a single example, has almost disappeared because shoes are today manufactured in large factories with the use of elaborate and expensive machinery, the work being performed by operations which bear little resemblance to shoemaking of olden times. In the manufacture of clothing, in the meat-packing industry, in the construction of automobiles, and in dozens of other important industries, a similar situation exists.

In large-scale clothing manufacture the tailoring trade has been broken up into a great many separate tasks, so that some 30 to 60 operations, each performed by a different worker, are now necessary in the making of a coat. In some shoe factories as many as 240 processes, performed by 100 different workers on 150 different machines, may go into the manufacture of a pair of shoes. According to Mr. Ford, 7882 different tasks aided in the production of the "Model T" Ford automobile. Division of labor by task, we may safely say, is one of the leading forms of specialization, and one that is quite definitely on the increase.

Specialization by Stages. A third type of specialization is by *stages* or complete processes. In transforming raw materials into finished products the work often takes place under the supervision of several different and wholly unrelated producers, each of whom considers an article finished when he has made his contribution to its progress toward the form in which it is to reach the ultimate consumer. In the manufacture of shoes the productive process begins with the raising of cattle, and the cattle producer sells his product with the feeling that his task is finished. The cattle, however, go to a meat-packing establishment where, among other things, the hides are removed and sold to a tanning establishment. So far as he is concerned, the meat packer is now through. The tanner also

has finished his job when the hide has been transformed into leather and is sold to the shoe manufacturer.

The shoe manufacturer himself is merely a step in this long process, for, although he feels that his function has been performed when the shoes are properly made and ready for use, there is still another process to be gone through. The shoes must pass from the manufacturer into the hands of a merchant, and not until the latter has delivered them to his customer has the production of a pair of shoes actually been completed. Nevertheless, through this long journey from the raw material to the finished and marketed product, there have been several stages at each of which the job was apparently complete.

Geographical Specialization. A fourth and very important form of division of labor is known as *geographical* or *territorial* specialization. Specialization of this kind is frequently based upon differences in natural conditions. Most of the cotton produced in the world is grown in southern United States because the soil and climatic conditions are favorable to its growth. For similar reasons raw silk is produced in Japan and coffee in Colombia and Brazil. Certain natural resources such as coal, iron ore, and petroleum are, as a matter of course, produced in those regions in which they have been deposited by nature. Thus certain areas near Lake Superior specialize in the production of iron ore, a limited region in the State of Pennsylvania devotes most of its economic effort to the mining of anthracite coal, and some parts of Texas and Oklahoma specialize in the exploitation of the great petroleum deposits of those states.

In addition to specialization on the basis of natural deposits or advantages of soil or climate, there is geographical specialization that is the result of developed or artificial conditions. Paterson, New Jersey, is famous as a silk center. Akron, Ohio, specializes in the production of rubber goods. Most of the cotton and woolen cloth manufactured in the United States in the past century was made in New England, though there is now apparent a tendency to move cotton mills to the South in order to be near the sources of raw material and cheap labor. Shoe manufacturing has been concentrated in New England in the past, but is now proceeding westward. In some instances there have been real reasons for the location of a given industry in a given city. The availability of water power has often been the explanation, but with the development of steam (and, more recently, of electricity) as a source of power this reason no longer exists for some localities specializing in the manufacture of certain goods. In the case of industries moving from one region to another, we have evidence that in the long run specialization on the basis of natural conditions will prevail. For example, it is sensible from the economic point of view to manufacture cotton cloth in the South near the basic material, provided other conditions are satisfactory, rather than in an area to which the raw cotton must be transported.

THE GAINS OF SPECIALIZATION AND THEIR ATTAINMENT

Since specialization is so widespread an economic phenomenon, it is obvious that it must bring about certain gains, or it would not have been adopted so widely. The chief social gains to be noted are the *greater variety and greater quantity of goods* which result from specialization of the types that have been mentioned. Industrial progress consists very largely of finding new and better ways of production. Specialization has come in response to the demand for improved methods. It has unquestionably resulted in greatly enlarged production, lessened costs of production, and higher standards of living for society in general. The gains that are realized from an application of the principle of specialization may be accounted for in a number of ways, which we shall proceed to examine.

Fuller Utilization of Individual Abilities. Specialization enables a worker to undertake a task which is especially suited to his peculiar ability. Some people are particularly adapted for mental and others for physical work. The average college professor would make a poor showing as a farm laborer, and the farm hand would not be much more likely to succeed in the college lecture room. Specialization of various kinds makes it possible for almost any person to find a place where his talents, physical or mental, great or small, can be utilized to advantage.

A very high degree of specialization, such as is employed in automobile plants turning out hundreds of thousands of cars a year, makes it possible to provide work for the weak and physically handicapped who, in the absence of extensive division of labor, would find it difficult or perhaps impossible to be self-supporting. Mr. Ford has described the physical requirements of the 7882 different jobs which, as we have noted, contributed to the production of the "Model T" Ford car. "Of these, 949 were classified as heavy work requiring strong, able-bodied and practically physically perfect men; 3338 required men of ordinary physical development and strength. The remaining 3595 jobs were disclosed as requiring no physical exertion, and could be performed by the slightest, weakest sort of men. In fact, most of them could be satisfactorily filled by women and older children. The lightest jobs were again classified to discover how many of them required the use of full faculties, and we found that 670 could be filled by legless men, 2637 by one-legged men, 2 by armless men, 715 by one-armed men, and 10 by blind men."¹ It would be hard to find a better illustration of the power of specialization to salvage human abilities which in an unspecialized industrial system would be largely wasted.

Attainment of Great Dexterity. In most manual operations great skill is acquired only through long training, and retained only by constant

¹ Henry Ford, in collaboration with Samuel Crowther, *My Life and Work*, New York, Doubleday, Doran & Company, Inc., 1923, p. 108.

practice. The idea that practice makes perfect is an old one, and its application to economic processes has been recognized by writers for hundreds of years. Xenophon, for example, saw that specialization made for proficiency and could be employed profitably when the demand for a product was great. "In small towns," he wrote, "the same workman makes chairs and doors and plows and tables, and often this same artisan builds houses, and even so he is thankful if he can only find employment enough to support him. And it is, of course, impossible for a man of many trades to be proficient in all of them. In large cities, on the other hand, inasmuch as many people have demands to make upon each branch of industry, one trade alone, and very often even less than a whole trade, is enough to support a man; one man, for instance, makes shoes for men, and another for women; and there are places even where one man earns a living by only stitching shoes, another by cutting them out, another by sewing the uppers together, while there is another who performs none of these operations but only assembles the parts. *It follows, therefore, as a matter of course, that he who devotes himself to a very specialized line of work is bound to do it in the best possible manner.*"²

Specialization, then, permits a person to devote sufficient time to the practice of a given trade or task to enable him to gain a mastery of that trade or task. The degree of skill that can be attained by steady practice is sometimes little short of phenomenal. Take, for example, the ability to use the typewriter. Anyone who has undertaken to learn typing will acknowledge that at first it is a slow and difficult process; and yet it is quite easy for the practiced typist to write a hundred or more words a minute, and at the same time read stenographic notes. The butcher, the baker, the candlestick maker—each of these artisans is likely to be a better workman by reason of being a specialist in his line.

Though we have dealt here chiefly with manual dexterity, it should be remembered that there is a dexterity of the mind that plays a part in most industrial operations, and a predominant part in certain types of work. The dentist's skill, acquired through long practice, consists as much in knowing whether to pull or fill the tooth as in performing the operation once it is decided upon. The lawyer's knowledge, gained through pleading hundreds of cases of a particular kind, is probably as useful to his client as the gift of oratory which enables him to sway juries. In like manner, the dexterity of the carpenter, the plumber, and the taxi-driver is a mental as well as a physical dexterity, and one which is usually most fully developed under conditions of specialization. For practice makes perfect in mental operations no less than in physical.

Simplification of Tasks. Specialization renders unnecessary the long periods of training that used to be essential in the mastery of certain

² Xenophon, *Cyropædia*, London, William Heinemann, Ltd., 1914, Book VIII, ii, 5; Loeb translation, p. 333.

trades. There was a time when young men served apprenticeships of three, four, or more years, in order to qualify as carpenters, bricklayers, or machinists. But the work of such artisans has, in many fields, been subdivided and simplified so that raw recruits may now be trained in a few days to perform the simple tasks which fall to their lot in the specialized industry of the present day. Henry Ford said that 43 per cent of the jobs in his plant could be learned in one day, and 36 per cent in one day to a week. The tendency of modern economic life is so definitely toward simplification of task that a long apprenticeship need now seldom be served in order for a worker to fill the ordinary factory job acceptably.

Because so many of our industrial tasks have been greatly simplified, they have been brought within the capacity of some members of society who, though physically sound, are mentally not sufficiently agile to perform complicated operations. Thus, some workers who would otherwise be day laborers are enabled, under conditions of advanced specialization, to perform more pleasant and more profitable tasks as operatives of semi-automatic machines, or to serve in other capacities that demand but little mental exertion. We have referred in an earlier paragraph to the ability of the physically handicapped to fill certain positions in specialized industry.

Continuity of Operation. A century and a half ago, it was not an uncommon thing for workmen to divide their time between manufacturing and agriculture, spending a part of the day spinning yarn or weaving cloth, and the remainder cultivating their small farms. Adam Smith and other early writers on economics remarked upon the wastefulness of this sort of arrangement, involving as it did the loss of time in moving from one job to another.

Present-day specialization eliminates this type of waste to a large extent, since specialization permits of economies through continuity of operation. Performing, as he does, a single task, the specialized worker need not lay down one tool and pick up another, for his job requires the use of only one tool. Likewise, there is no necessity for adjusting his mental attitude to a new task since, under specialized industry, he is likely to perform the same task almost continuously throughout the day. Finally, continuity of operation may be realized, and its benefits reaped, through the specialization of machinery. If a machine is given over to the continuous production of a single grade of commodity—a loom, let us say, used only for weaving cloth of a particular kind—there is a saving of the time and energy which would be needed to reset the machine if it were being employed in making first one grade and then another of the good. Consequently, more units of the product can be turned out in a given period of time under specialization than under conditions of non-specialization.

Greater Mobility of Labor. Since specialization results in the simplification of tasks, it adds to the ease with which workers may move from one

job to another. Much of the work in industry is now done on semi-automatic machines, and the general similarity of machine operation enables a machine operator in one industry to move at times into a different industry and take up, without long training, the operation of a machine requiring the same type and grade of skill, and yet turning out a very different product. Professor Marshall points out that "most of the operatives in a watch factory would find machines very similar to those with which they were familiar, if they strayed into a gun-making factory or sewing-machine factory, or a factory for making textile machinery. A watch factory with those who worked in it could be converted without any overwhelming loss into a sewing-machine factory; almost the only condition would be that in the new factory no one should be put to work which required a higher order of general intelligence than that to which he was already accustomed."³ The emergency demands of World War II demonstrated our ability to convert much of our industrial plant and labor to the production of new types of goods; and post-war reconversion showed that we could speedily go back to peacetime production, once the need for wartime goods had passed.

But the narrowly specialized worker is likely to find it a difficult task to get work in times of depression, because the job he is able to do can be done only in conjunction with many other operations in a plant which may be shut down. This disadvantage of specialization will be touched upon later in the present chapter.

Employment of More Machinery. Specialization leads to the greater use of machinery in production. Division of labor consists of splitting up jobs, and in this process of dividing jobs into several parts it is often found that some of the work formerly done by hand can be turned into a machine operation. When the movement to be made is a simple one, and when it must be repeated hundreds or thousands of times a day, it is usually possible to entrust it to the swift, sure performance of a machine. And it is ordinarily profitable to do so, unless labor happens to be very plentiful and consequently cheap, or capital is scarce and the interest rate high. If absolute accuracy of movement is important, there is additional reason for employing machinery, for even the most skillful worker cannot repeat a movement as exactly as it can be repeated by a well-constructed machine. The part played by accuracy in the metal-working trades is emphasized in a later section dealing with the manufacture of interchangeable parts.

Since specialization leads to lower prices for commodities, and since these lower prices make it possible to dispose of very large quantities of goods, it is sometimes feasible to purchase an expensive machine which would have been entirely too costly had specialization not been developed

³ Alfred Marshall, *Principles of Economics*, London, Macmillan and Company, Ltd., 1930, 8th ed., pp. 258, 259.

to a high degree. Professor Taussig has cited the case of a machine bought by the International Harvester Company, a machine "whose sole work is to shape poles for wagons and harvesters. The machine cost \$2500; it saves a cent per pole; it is worth while only because poles by the hundred thousand are made each year."⁴ Here we have specialization and large-scale production combining to make possible an economy through the use of highly specialized machinery. It is true, of course, that specialization and large-scale production frequently go hand in hand, as in the meat-packing and automobile industries; and wherever they are found they provide a powerful stimulus to the invention of labor-saving devices.

Example of Specialization in Meat Packing. One of the reasons specialization results in great economies is that it permits conformity to a principle of scientific management laid down at least a century ago, and more recently emphasized by Frederick W. Taylor and his followers. This principle states that a worker should be given the highest type of work he is capable of performing, and that type only.

The significance of this principle is seen when we realize that in the meat-packing industry the wages of workers range from 72½ cents to \$1.31½ an hour. Needless to say, the \$1.31½ man is a highly skilled worker, and the 72½ cent man is not. The principle cited above demands that the \$1.31½ worker give all his time to the performance of skilled operations, allowing men less highly paid to carry on work of less importance. In 1904, Professor John R. Commons wrote an interesting description of the tasks performed by workers receiving different wages in the meat-packing industry. With the figures brought up to 1941, the description in part is as follows:

The \$1.31½ cent man is restricted to using the axe in splitting the backbone (splitter); and, whenever a less skilled man can be slipped in at 72½ cents, 75½ cents, 77½ cents, 80½ cents, 84½ cents, 87½ cents, 91½ cents, and so on, a place is made for him, and an occupation mapped out. In working on the hide alone, there are a number of positions at different rates of pay. A 77½ cent man pulls off the tail. The knife of the \$1.08½ man cuts a different texture and has a different "feel" from that of the \$1.17 man. Skill has become specialized to fit the anatomy. In this way, in a gang of 74 men, slaughtering and dressing 110 cattle an hour, there are but 10 men paid \$1.31½ an hour, 2 men paid \$1.17, while the number getting 84½ cents and over is 36, and the number getting under 84½ cents is 38.⁵

This illustration shows quite clearly that adherence to the principle stated above results in definite economies. As an evidence of industrial progress, we may note the fact that when Professor Commons wrote his

⁴F. W. Taussig, *Principles of Economics*, New York, The Macmillan Company, 1939, 4th ed., p. 49.

⁵Professor Commons' article was entitled "Labor Conditions in Meat Packing and the Recent Strike," and appeared in the *Quarterly Journal of Economics*, vol. xix, p. 324.

article in 1904, it required 230 men to kill and dress 105 cattle in an hour. At the present time, a gang of 74 men handles more cattle (110, to be exact) in an hour. It is increased productivity such as this which permits the payment of higher wages to workers. In the meat-packing industry wages have increased very materially, in many instances more than 100 per cent, since 1904. But this does not mean the ability to purchase twice as much goods as formerly, since the cost of living has also increased, though not (except for the post-war period) so greatly as wages.

Manufacture of Interchangeable Parts. Another important industrial principle, which is closely related to specialization, is that of standardized or interchangeable parts. Again the principle is not a new one, though it has in recent years been employed more extensively than ever before. But as early as 1813, Simeon North, the first official pistol manufacturer to the United States government, was awarded a contract for 20,000 pistols, to be manufactured so that "the component parts of pistols are to correspond so exactly that any limb or part of one pistol may be fitted to any other pistol of the 20,000."⁶ And Professor Marshall tells of the representative of an American watch factory, who, at the Invention Exhibition held in London in 1885, "took to pieces fifty watches before some English representatives of the older system of manufacture, and after throwing the different parts into different heaps, asked them to select for him one piece from each heap in succession; he then set these pieces up in one of the watchcases and handed them back a watch in perfect order."⁷

Probably in no industry has this principle been used more widely than in the manufacture of automobiles. A Ford, Chevrolet, or Plymouth car is so much like another Ford, Chevrolet, or Plymouth of the same model that a broken part may be replaced by a new part at very slight cost and with almost no loss of time. A similar advantage is enjoyed in the case of a great many commodities. Modern industry has been standardized or made uniform. This uniformity has been possible largely through the machine process, and the machine process in turn is tied up very definitely with specialization of labor.

It is true that specialization could exist to some extent in an industrial society which used but little machinery, but the fact is that specialization and the machine process have marched forward together in the business world. As a consequence, the consuming public buys goods at lower prices than formerly, enjoys the use of some goods which could not be made without the aid of machinery, and is able to replace broken parts of automobiles, farming implements, watches, radio sets, and countless other articles without delay and with very little expense.

Specialization and Large-Scale Production. Since specialization and

⁶ Related in L. P. Alford, *Laws of Management*, New York, Ronald Press Company, 1928, p. 107.

⁷ Alfred Marshall, *Principles of Economics*, p. 258, f.n.

large-scale production are so closely related, it is difficult to separate their advantages and determine which are attributable to each. An examination of the benefits of large-scale production (to be discussed in the next chapter) discloses the fact that at least some of these gains are due primarily to the use of specialization in large-scale production.

Specialization and Transportation. Adam Smith and other writers have emphasized the fact that specialization is limited by the extent of the market. The more extensive the market—that is, the larger the quantity of a good that can find buyers—the stronger will be the tendency to specialize. Clothing manufacturers have found it profitable to break up the old *trade* of tailoring into scores of minute *tasks*; but such specialization is profitable only because the product sells throughout the country by hundreds of thousands of units.

An extensive market, in turn, often depends upon the ability to send goods to distant points and offer them there at attractive prices. This is clearly seen in the field of international trade. Automobiles, for example, are made under highly specialized conditions in the United States and exported profitably to all parts of the world. The development of speedy and cheap highway, railway, and ocean transportation has made possible the expansion of the automobile market to world dimensions, and this expansion has led to the almost incredible degree of specialization that prevails in the automobile industry. If, then, specialization is limited by the extent of the market, it is equally true that the extent of the market is limited by the transportation facilities available at a given time.

INDIVIDUAL AND SOCIAL EFFECTS OF SPECIALIZATION

Monotony of Labor. But specialization is not without its disadvantages. It is particularly likely to have harmful effects upon labor, the human factor in production. One serious disadvantage of our present industrial system is the monotony and irksomeness of labor performed under highly specialized conditions. We have seen that many workers today are engaged in performing *tasks*, and often very minute ones, instead of carrying on the more general work which is done under conditions of specialization by *trades*.

It is one thing for a tailor to design and construct a suit of clothing, and quite another for a worker in a modern clothing factory to devote his entire working time to making buttonholes. And yet a large percentage of our industrial workers today are engaged in tasks which to many persons must be distinctly uninteresting. When one buys a padlock, one receives with it two keys on a small wire ring; and in lock factories in various parts of the country young men spend their time, eight hours a day, five days a week, putting these keys on rings.

Thousands of workers throughout the United States contribute to the productive process by supervising semi-automatic machines. Into the machines are fed, in some cases, strips of brass or other material from which are stamped small metal disks to be used in certain branches of manufacture; and the worker's job is merely to see that these machines do their work continuously and accurately. It is no wonder, then, that many industrial employees work with one eye on their machines and the other on the clock, and that they regard the working day as a certain amount of time to be expended and done with.

The evils of monotony are generally recognized by managers; and while some employers regard monotony as unavoidable, others are doing their best to counteract its ill effects by providing rest periods at intervals during the day. Thus the worker is enabled to get his mind off his task for a few minutes, and comes back to the job refreshed both physically and mentally. It is difficult, if not impossible, to determine how serious are the actual effects of monotony on workers, but there can be no doubt that its dangers have often been exaggerated by overzealous writers. Work that might be deadly to some does not appear to injure others, and those who would be affected detrimentally often escape by not having to do the kinds of jobs that would be both distasteful and harmful to them.

Loss of Interest in Job. Another disadvantage of specialization is that it is likely to stifle the instinct of workmanship. The old-time shoemaker who could produce a shoe, having nothing but the raw materials and his tools to start with, was able to exhibit his product as a piece of creative work. In some instances, at least, he took an honest pride in being a master craftsman; and, in addition to receiving pay for the shoes that he had made, he might receive also a word of praise for the excellence of his work. But the modern shoe operative has little chance to feel the glow that goes with a sense of being a creative artist. He makes not a whole shoe, but perhaps a fiftieth part of a shoe. He never comes into direct contact with his customer, and in all probability never sees the finished product in the manufacture of which he has had a part. Such a situation means a lessening of interest on the part of the worker, and a lack of realization of the true significance of his contribution to society in carrying on faithfully his daily task.

Here, again, progressive employers have attempted to remedy the evil. In some cases workers are taken on trips through the plant and are given an opportunity to hear talks and see motion pictures which describe the entire process of manufacture; and thus, in some small measure at least, they are made to feel that they have a definite and important share in the productive process.

Narrowing Effect of Specialization. Another danger of specialization, closely related to the one we have just discussed, is its narrowing influence on the workers under the conditions of extreme subdivision of labor. The

difficulty is that specialization often means the continuous use of one part of a man's ability, and that part only. The result is an overdevelopment of certain faculties of the worker, to the neglect of other faculties. A workman under these conditions, having devoted perhaps twenty or thirty years to the performance of a single task, is pretty certain to be a one-sided individual.

It has been suggested that this disadvantage might be overcome to some extent by training every man for at least two types of work, so that, in addition to avoiding the monotony of performing the same task over and over again without relief, he might develop more of his talents than are usually developed under modern industrial conditions. Something has been accomplished along this line, but much remains to be done. Fortunately, the development of minute specialization of task has been accompanied by a reduction in the number of hours that make up the customary working day. The narrowing effects of highly specialized work may be largely counteracted if, when the toil of the day is over, a workman has at his disposal a very considerable amount of free time in which he may engage in study, in some type of work that is much to his liking—say, home gardening or home carpentering—or in play pure and simple.

Increased Interdependence. Specialization results in increased interdependence between individuals, communities, and nations, and this interdependence sometimes has undesirable results. Under simple economic conditions, with the family producing virtually everything that it required, there was little or no dependence upon others. Nowadays, a failure of the cotton crop of the South would affect not only the farmers engaged in raising cotton, but the merchants who live by selling groceries, hardware, clothing, and other necessities to cotton producers, the railroads that depend upon the prosperity of the cotton belt for patronage and consequent revenues, and, indeed, all who are associated in a business way with this great economic area.

The inability to get raw material, cotton, might easily cause the closing of cotton mills in New England, or even in Europe, as was the case during the Civil War. On the other hand, should British manufacturers be unable to find markets for their cotton goods, the effect would be to reduce materially the exports of cotton from the United States to England, and perhaps bring the price in this country far below the actual cost of production.

The dangers of an economic society in which there is a high degree of interdependence can be seen in an examination of the long, dreary business depression that had its beginning in 1929. At one period in this depression, some twelve million men and women—one-fourth of the total labor force of the United States—walked the streets looking for work. They were dependent upon business enterprisers for employment, and these enterprisers had no jobs to offer since they saw no chance, in the

face of the depression, to make and sell their products at prices sufficiently high to cover all costs of production. Something that had happened to our complicated economic machinery, upon which these millions depended for a livelihood, brought large portions of that machinery to a full stop, rendering these would-be workers penniless and dependent upon the government—local, state, or federal—for relief funds to keep them from actual starvation. In a less complicated, less specialized economic society, in which families were largely self-sufficient, producing chiefly for their own use rather than for exchange, an economic collapse of this kind would be much less likely to occur. On the other hand, such a society would have to content itself, other things being equal, with a lower standard of living in normal times than could be enjoyed by the more highly organized, specialized, interdependent society.

Separation of Workers from Ownership of Tools and from Product.

Specialization, as it works out under the private ownership of capital, results in the separation of the worker from both his tools and his product. Under present-day conditions, as we have just noted, most workers are dependent upon other persons to provide them with jobs. But they also look to others for the tools with which they are to perform their tasks. When industry was in a simple stage and the machinery required was inexpensive, the worker could often be far more independent than he now is. Manufacturing today is carried on with the aid of costly machinery which the individual workman can neither buy nor operate alone, and so he is compelled, in good times and bad alike, to look to an employer for a job; and when times are bad, as we have seen, the jobs of many workers vanish as into thin air.

Wholly apart from the possibility of being unemployed because of his dependence upon capitalist enterprisers, the worker finds it hard, if not impossible, to know whether he is receiving as much pay for his services as he should have. It is commonly said that the worker is entitled to whatever he produces. Under simple industrial conditions there is little difficulty in knowing what the individual worker produces. When the old-time shoemaker completed his pair of shoes, the finished shoes were his product, and he was at liberty to sell or exchange them for something else. The modern shoe operative, whose task may consist merely of tacking on heels or sewing in tongues, finds it much more difficult to ascertain just how much his product amounts to. He is likely to be compelled to take the employer's decision in the matter, unless, through labor union action, he has a part in making this decision.

Many problems have arisen, and are constantly arising, in connection with the size of the share of the product that goes to the worker. Strikes have been fought time and again over the question of wages, which is simply the question of the share of the product the employee is to receive for his assistance in the productive process.

Benefits to the Workers. All of the disadvantages here noted are likely to have a detrimental effect upon the workers as individuals, and some, as has been seen, affect society in general. There are several benefits to workers which have been brought about largely through specialization, and which tend in some degree to offset these disadvantages. One of these benefits is shorter hours. A few decades ago a working day often consisted of ten hours, and sometimes of eleven or twelve. Nowadays eight hours of work are all that most industrial workers in this country are expected to put in, in a single day. Indeed, following President Roosevelt's introduction of the "New Deal" in 1933, thirty-five or forty hours constituted the working week in some industries, and prior to World War II organized labor waged an aggressive campaign for a thirty-hour week. The short working week of today is the result of several causes, one of which is the insistent demand for fewer hours of work in view of the increasing monotony of labor. The reductions in hours that were introduced in 1933 represented an attempt to "spread work," to the end that a progressively smaller number of those thrown out of work by the depression should remain wholly unemployed. It seems probable that forty hours will constitute the "standard" working week for some years to come.

Specialization has resulted also in the abolition of much heavy, dirty, disagreeable work which was formerly performed by human beings but is now being done by machinery. Yet another advantage is the larger income (not only *money*, but *real income*) of today as compared with that received by wage earners of the nineteenth century. Specialization, as we have seen, brings greater wealth, and this makes possible in turn higher standards of living for workers as well as employers.

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1. Show, by means of illustrations, that specialization in merchandising, manufacturing, and agriculture tends to increase with the growth in population.
 2. Four forms of specialization are noted in this chapter. Name these forms, and give an illustration (not cited in the text) of each form.
 3. Give figures showing that specialization by task has been utilized to a great extent in the clothing and shoe-manufacturing industries.
 4. Give at least five examples of "geographical specialization," and in each case try to explain the reason for specialization being adopted or continued.
 5. What are the two chief social gains that are realized through utilizing the principle of specialization?
 6. Explain the manner in which the use of specialization lessens the waste of human ability in economic activity.
 7. What has specialization to do with the mechanization of industry?
 8. The text mentions "a principle of scientific management laid down at least a century ago, and more recently emphasized by Frederick W. Taylor and his followers." State this principle.

9. Precisely what is the significance of specialization in meat packing, as described in the text?
10. What is meant by "interchangeable parts"?
11. Describe Professor Marshall's illustration of perfection of manufacture in the watch industry.
12. What are the advantages, to the consumer, of interchangeable parts?
13. Explain how the practice of specialization may conceivably lead to monotony of labor.
14. How may monotony of labor be counteracted?
15. Why does the development of specialization lessen the worker's interest in his job?
16. Discuss the dangers of economic interdependence.
17. What connection, if any, is there between specialization and a worker's inability to get a job?
18. Does specialization lead to industrial strife? Explain.
19. Discuss *hours* and *wages* in connection with specialization.
20. How does specialization result in the abolition of "much heavy, dirty, disagreeable work"?

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The Size of the Business Unit

BUSINESS ORGANIZATIONS VARY GREATLY IN SIZE AS WELL AS IN FORM. SCATTERED throughout the country are thousands of very small business units, conducted in most cases by individual proprietors or by partners. Corporations also are sometimes small, but since, as was observed in Chapter 7, one of the distinct advantages of the corporate form of organization is the ability to get together large quantities of capital, it is not surprising that we find in the corporate form of organization a number of very large concerns.

Growth of Large-Scale Business. Moreover, the tendency is clearly in the direction of large-scale business as opposed to business conducted in small units. According to authoritative figures, 2.2 per cent of all manufacturing establishments in the United States in 1914 had an annual output valued at \$1,000,000 or more per establishment. And yet these relatively few establishments employed 35.3 per cent of all wage earners in manufacturing plants, and produced 48.7 per cent of the value of all manufactured goods. But by 1937 manufacturing establishments with an annual output of \$1,000,000 or more constituted 6 per cent of the total number, employed 58 per cent of all wage earners engaged in manufacturing, and produced 70 per cent of the value of all manufactures in the country. When due allowance has been made for changes in price levels (which are explained in Chapter 36, Vol. 2), these figures show the growing importance of the large business unit in our present-day industrial world.

Measurement of Business Units. Difficulties sometimes arise in connection with the measurement of business units. How shall we know whether to classify a business concern as large or small? Is it large (1) when it employs a large number of workers, (2) when it has a high capitalization, or (3) when great value is added to raw materials in the process of manufacture? The answer often depends upon the nature of the industry under consideration, and the purpose of the inquiry. Some types of industry require many wage earners if they are to operate on a large scale; others, again, depend more extensively upon the use of machinery, and their greatness may be measured by their capitalization; and so on. The fact is that all of the measurements listed above have advantages and disadvantages, but the first and third are probably the most generally useful. Our census authorities employ all three.

A large-scale business, then, is one which measures up to any one or more of the standards that we have noted. In a practical way, there is but little difficulty in determining whether a business is large-scale or not. There can be no question that Hart, Schaffner and Marx engage in large-scale manufacturing; Sears, Roebuck and Company in large-scale merchandising; the New York Central Railroad in large-scale transportation; and J. P. Morgan and Company in large-scale finance. Examples of small-scale enterprisers in similar lines are the custom tailor in manufacturing, the corner grocer in merchandising, the independent taxicab driver in transportation, and the pawnbroker in finance. These are extreme cases chosen admittedly for the purpose of contrast, for economic principles (such as those of large-scale business) are often seen most clearly when extreme cases are cited.

Each of the great business concerns just named is large-scale on several counts. Indeed, if an establishment has large capital or employs a large force of workers, it almost inevitably adds greatly to the value of raw materials in the course of manufacture. Otherwise, it could scarcely afford to have a large payroll or employ a great quantity of capital. Large-scale operation, it may be added, is often thought of as relating primarily to manufacturing, probably because it has had its greatest development in that field. But, as we have seen, there are some striking examples of large-scale business in other lines of economic activity.

ADVANTAGES OF LARGE-SCALE PRODUCTION

The steady increase in the size of business establishments in the United States is based, in large part, upon certain advantages which are enjoyed by concerns operating large-scale business enterprises. Of course, great size is not a guaranty of efficient operation, but large-scale businesses can often effect economies which are not attainable by enterprises conducted on a small scale. We shall note some of the advantages which accrue to large-scale producing units. All of these advantages, it will be noted, lead to lower costs of production.

Lower Costs of Plant, Machinery, Materials, and Power. A suit of clothes for a 250-pound man may cost more than one for a man weighing only half as much, but it will not ordinarily cost twice as much. For, while the larger suit requires much more material than the other, the quantity of labor and the type of skill demanded in its manufacture are little if any greater than are needed in making the smaller suit.

Similarly, in the construction and equipment of an industrial plant, there are many items of cost which do not increase in proportion to increases in the size of the building or equipment. "A factory building which contains four acres of floor space can be constructed of less materials and with less labor than four similar buildings which each contains one

acre of floor space—even after providing for equally good ventilation and natural lighting. Nor will its heating and artificial lighting be four times as expensive. . . . A 1000 horse-power motor is not ten times as costly to build or to buy as one of 100 horse-power. Neither is its expense of installation, wiring, repairing, or upkeep ten times as great. Nor does it have ten times as much dead weight or friction to overcome.”¹ It would be easy to multiply examples showing that a large concern enjoys an advantage over a smaller concern in the matter of the construction of buildings and the provision of some types of expensive machinery.

Again, large-scale production permits a concern to buy its raw materials and machinery in great quantities, and consequently at lower prices than would be quoted for small purchases of these goods. If a plant regularly takes a large part or all of the output of a producer of raw materials, the seller can afford to make substantial reductions in price. Carload lots of cotton may be purchased at a lower price per pound than single bales of cotton; and a textile mill that is large enough to use great quantities of this raw material can buy the goods at a lower figure than will be asked of small cotton-cloth manufacturers. Furthermore, sellers often give large purchasers a more careful consideration of orders and a longer extension of credit than are accorded their smaller customers.

The large business unit has an advantage also in the purchase of power. If coal is being used as a source of power, the ability to buy it in huge quantities keeps down the price; and if electrical current or gas is utilized, the rate decreases with an increase in the quantity used.

Savings in Transportation. A similar argument applies to the cost of transportation which must be met by a business organization. Freight rates on carload lots of goods are naturally lower than on small shipments, since, per ton of goods shipped, it costs a railway company materially less to haul in carload lots than to handle small consignments. This is an advantage which may be enjoyed by large-scale concerns in both the purchase of raw materials and the shipment of the finished product, for the large-scale producer is very likely to sell his product in large quantities, as well as to buy his raw materials in bulk.

Gains Through Specialization. In Chapter 8 we examined the many and great advantages that result from specialization of labor, and shall pause here simply to note that large-scale production makes possible a high degree of specialization. A plant with a thousand employees is likely to utilize much more specialization than is a factory with only a hundred workers. We have already noted the fact that specialization is limited by the size of the market—that it does not pay to specialize unless large quantities of goods can be sold. Since specialization is limited by the amount of goods produced, a large-scale producer is obviously in a position

¹ Horace Taylor, *Making Goods and Making Money*, New York, The Macmillan Company, 1928, pp. 83-85.

to utilize the principle of specialization to a greater degree than is the manager of a small plant.

Extensive Use of Latest Machinery. Large-scale production makes it advisable to use highly specialized machinery, to use it intensively, and oftentimes to use it in extremely large quantities. Since the indirect method of production is economical, as we saw in an earlier chapter, it follows that the more machinery that is used (if wisely used), the greater will be the economies of production. The cost of a steam shovel would be prohibitive to a small builder, but to a large contracting company the shovel is not only essential, but economical, for purposes of excavation. In like manner, large corporations (or large enterprisers of any type, for that matter) are able to take advantage of the latest mechanical developments. Indeed, enterprisers who turn out many units of goods cannot afford to overlook a machine the use of which will enable them to save even a fraction of a cent of cost on each unit of their product.

Employment of Practical Experts. Large-scale production makes possible the use of the highest types of managerial and technical skill. An executive at \$100,000 a year is out of the question for a small business, but an expert of this kind may be employed quite profitably by a great corporation whose annual output runs into millions of dollars. It is natural, therefore, that the best managers and technicians should be attracted to the great corporations of the country. And it is natural that these great business concerns should be willing to pay handsome salaries, because the use of high-grade employees adds but little to the cost of each unit of goods produced under large-scale conditions. An expert who could reduce, by five cents per car, the cost of automobile manufacture would clearly be worth \$50,000 a year to an automobile concern with an annual output of a million cars.

Utilization of By-products. The large producing unit is enabled to make use of by-products which are almost necessarily waste to the small establishment. Probably no better example of economy of this kind can be found than the utilization of by-products in the meat-packing industry. Only about one-half of the weight of a steer is converted into usable beef. Consequently, the small-town butcher finds that a large part of the animal is worthless to him. Since his business unit is so small, he cannot profitably turn the waste materials into salable by-products. The great Chicago meat packers, however, are able to use almost every part of a steer or other animal. Glue, fertilizer, soap, and buttons are a few of the hundred or more articles that can be made from the "waste materials" of a meat-packing establishment if the plant is of sufficient size to make possible the profitable manufacture of by-products.

Another striking illustration of the utilization of by-products is found in the petroleum-refining industry. Gasoline is the chief product of petroleum today, having usurped the place that was held by kerosene before the

advent of the automobile. Though a small refinery can extract the gasoline from petroleum, it requires very elaborate equipment to make the most of the materials that remain after the major product has been secured. It is only the large-scale refiner who is able to utilize to the utmost this residue, which is made to yield up lubricating oils, paraffin or asphalt, and various other valuable commodities.

Experimentation and Research. Closely related to the subject just discussed is the establishment of departments of research in large-scale businesses. Research men are employed at large salaries by some manufacturing concerns, and these men are constantly experimenting in the attempt to discover new ways of using by-products, or better methods of manufacture, which will result in a higher grade of product or lower cost of production, or both.

The application of science to industry is just in its infancy, but we have seen enough of its results to realize that manufacturers of steel, rubber, textiles, and many other articles cannot afford to be without an efficient corps of research men. But these men, as we have already intimated, must be of high caliber if their work is to be fruitful and consequently they must be paid high salaries. It is only under conditions of large-scale production that business concerns are able to employ scientists of this type.

A sensational instance of economies brought about through experimental work carried on by experts is cited by Henry Ford. One of the problems of the Ford plant was that certain parts made of steel, "such as axles, did not cool evenly, and after treatment they had to be straightened, which added to the cost. We set a young man the task of bettering all our heat treat operations. He felt his way for a year or two and then began to get results. He not only cut down the number of men, but he devised a centrifugal hardening machine which cools the shafts evenly all around. Thus they do not bend, and the straightening operation is no more. . . . These changes may not seem important, but cutting out the item of straightening after the heat treat has saved us around thirty-six million dollars in four years!"² Mr. Ford's statement was made in 1926, so that the economies of this particular improvement have been realized over a very considerable period of time.

Gains in Marketing. Finally, there is a good deal to be said for large-scale production in connection with marketing. If goods are manufactured in large quantities and at low cost, the selling price likewise can be low, and as a consequence it is easier to find buyers for these goods. It is possible also, in many instances, to find buyers who will purchase in large quantities. Among the economies of marketing, advertising should be mentioned. Printed matter can be produced much more cheaply in large quantities than in small lots. Advertisements in popular magazines

² Henry Ford, in collaboration with Samuel Crowther, *Today and Tomorrow*, New York, Doubleday, Doran & Company, Inc., 1926, pp. 66, 67.

running into thousands of dollars are a great aid in marketing and are within the range of the large-scale manufacturer, but they are entirely outside the reach of the small producer. The actual sale of goods, also, is more economical in large than in small quantities. If a salesman can dispose of a product in carload lots, his time is much more productive than if he is selling goods manufactured in small quantities, of which each customer buys only a few dozens or a gross.

LARGE-SCALE AND SMALL-SCALE INDUSTRIES

Example of a Large-Scale Industry. There are certain industries which lend themselves particularly well to large-scale production. One of these is the steel industry. There are many good reasons for conducting the manufacture of iron and steel on a large-scale basis. One of the most important is the tremendous outlay necessary to secure blast furnaces, steel furnaces, and other equipment. The minimum cost of a modern blast furnace, used for converting iron ore into pig iron, is something like a million dollars; furthermore, once it is fired, the furnace must be kept in continuous operation. Likewise, the cost of open hearth furnaces for the manufacture of steel from pig iron is very great. These are initial costs which may be met only by concerns that have access to large funds.

In steel manufacture, great quantities of heavy materials have to be transported from place to place. This is done by mechanical power, and here again there are economies in having large units in place of small units. A large electric crane, for example, can be handled by one man just as easily as a small crane. It is advantageous, also, for a steel manufacturer to make molten pig iron into steel without allowing it to cool; and, again, there is an economy in fashioning the steel into finished products before it becomes completely cold. Steel makers have found it desirable also to use the gases from blast furnaces in operating the other branches of their works.

Fields of Large-Scale Enterprise. It is small wonder, then, that steel mills are operated on the basis of large-scale production. Indeed, they could not be operated efficiently on any other basis. There are many other industries which for various reasons may properly be termed "essentially large-scale." Professor Willard L. Thorp, in a study to which we shall make frequent reference in the present chapter, has published a list of such industries.³

1. Industries which require a large capital investment, particularly in plant and equipment: Sugar refining, copper smelting, steel mills.

2. Industries which are monopolies, and which have a sufficiently large market to make operation on a large scale feasible. This includes artificial monopolies,

³ Willard L. Thorp, *The Integration of Industrial Operation*, Washington, Government Printing Office, 1924, p. 88.

such as those based on patent rights, as well as the monopolies by nature: Public utilities, manufactured ice.

3. Industries in which a natural resource is required and in which that natural resource is limited in amount and localized in geographical distribution: The manufacture of lead and zinc products.

4. Industries in which the product is capable of standardization and particularly in which a test for quality is required: Sugar, salt, meat packing, etc.

5. Industries in which the product is highly complex and can be constructed, therefore, only by an intricate fabricating system or a large and diversified organization: Typewriters, adding machines, textile machinery, and automobiles.

6. Industries in which the product is large in size, requiring complex equipment for construction and large capital investments: Shipbuilding, locomotives, ordnance.

Opportunities for Small-Scale Business. There are some industries, however, which seem to be perfectly capable of withstanding the forward march of large-scale production, or, at least, have been able thus far to provide opportunities for those who wish to conduct business on a small scale. Agriculture is carried on, as a rule, in small units. It is a type of production in which it is difficult to use specialists, since their opportunity for work would depend upon weather conditions and other uncontrollable factors. It is, however, an industry in which machinery is coming more and more into use, and there are indications that we may see more large-scale farming in the future than in the past.

Retail merchandising is a business activity which may well be conducted on a large scale, as is apparent in our great department stores and mail-order houses. Nevertheless, the development of these large mercantile establishments has not put out of business the small shopkeeper and it seems likely that there will always be a place for specialty shops which combine the advantages of convenient location with prompt and expert service.⁴ Those lines of work in which there is a close relationship between the seller of a service and the customer are likely to remain, for the most part, in the field of small units. The work of the plumber, the printer, the electrician, and the paperhanger is illustrative of types of economic activity which do not lend themselves readily to large-scale operation.

We may again quote from Dr. Thorp's study, and enumerate some general types of industry which are essentially small-scale:⁵

1. Industries whose product cannot be standardized and establishments which attempt to make products to suit the differing tastes of consumers. Such industries

⁴ In 1939, 54.2 per cent of our retail stores had an annual volume of sales of less than \$10,000 per store, but they did only 9.1 per cent of the total selling of all retail stores. More than 23 per cent of the total sales were transacted by establishments which had sales totaling \$300,000 or more each, and which comprised only seven-tenths of one per cent of all retail stores (*The Economic Almanac, 1946-47*, New York, National Industrial Conference Board, 1946, p. 90).

⁵ *The Integration of Industrial Operation*, p. 89.

produce "tailored" suits, high-grade furniture, art goods, finely bound books, etc.

2. Industries producing for a small market, such as those manufacturing artists' materials, nets and seines, models and patterns.

3. Industries in which the local market is small and whose product has a high transportation cost. In the manufacture of artificial-stone products, or bricks in many localities, the activity could never be conducted on a large scale because of the limitation of the market for its product and the expense of transportation.

4. Industries in which the material used is widely scattered and cannot be concentrated because of high transportation cost or rapid deterioration. Cheese factories and cider mills may be included in this class.

5. Industries in which skilled labor is the chief element, such as engraving, job printing, etc., whose products are really services rather than commodities.

The Optimum Size of Business Unit. We may now raise the question whether there is an *optimum*, or best, size for a business. It is fairly obvious that there is no such optimum for *industry as a whole*, for, as we have just seen, some types of business flourish under large-scale operation while others do better when conducted in small units. It is quite possible, however, that for any given kind of business there is an optimum size—a size at which the business can be operated more advantageously than if the business units were either smaller or larger.

Mr. E. A. G. Robinson, a British economist who has made a careful analysis of this problem, lists five forces which combine to determine the best size of the business unit.⁶ There may be an optimum size from the point of view of (1) technique, (2) management, (3) finance, (4) marketing, or (5) risk and fluctuation. "These five forces may, in certain cases, lead to an approximately similar optimum size," says Mr. Robinson. But he shows also that in some instances a consideration of these five forces may lead to the conclusion that the needs of each can be met fully only by the adoption of a size of organization that would be detrimental to the interests of the other four. The technical optimum size, for example, may require a plant so large as to endanger the life of the business in time of business depression; or the technical optimum may be so large that the business, if conducted on such a scale, would be unwieldy from the point of view of good management. Again, considerations of economy in the fields of marketing or finance may dictate a size of plant that would be technically uneconomical or would involve the shouldering of an unduly large amount of risk.

There are possibilities, as Mr. Robinson shows, of reconciling some or all of the several optima, but reconciliation cannot always be brought about. What has to be done ordinarily is to make certain compromises, adopting as the best size a unit which will not, perhaps, conform strictly to any one of the five optima that we have named, but which, *all things*

⁶ E. A. G. Robinson, *The Structure of Competitive Society*, New York, Harcourt, Brace & Company, Inc., 1932, p. 16.

considered, will be the best size from the point of view of low costs. For the best size of producing unit, Mr. Robinson concludes, is the size of "that firm which in existing conditions of technique and organizing ability has the lowest average cost of production per unit, when all those costs which must be considered in the long run are included."⁷

EXPANSION OF THE BUSINESS UNIT

Large-scale production does not as a rule spring up overnight, but is more often the result of development that extends over a period of years. Business men usually deliberate long and seriously before undertaking the financial and managerial obligations that are involved in increasing the size of the business unit. In some instances a business passes, by a sort of evolutionary process, through a series of steps or stages, until it finally becomes an industrial giant. Great businesses, like great oaks, have usually had small beginnings. The Victor Talking Machine Company grew from a tiny workshop into a huge factory, the Strawbridge and Clothier Company of Philadelphia from a small merchandising business into a great department store. Sometimes, however, a business expands through the combination of two or more established concerns which thereafter are operated under a single ownership.

Evolution of a Shoe-Producing Concern. We may illustrate the expansion of a business unit by citing the experience of a shoe-manufacturing enterprise in New England. It began in a modest way, with a small factory and few employees. Gradually, however, it built up a demand for its product; as the demand grew, additions were made to the plant and equipment, more operatives were engaged, and eventually the plant was almost four times its original size.

By and by, this larger plant was not able to manufacture in sufficient quantity to meet the demand for its product. There was some thought of building a second factory in the same community, but the labor supply of the town was fully employed, and it seemed best to expand in another locality. Consequently, these enterprisers scoured the country roundabout in search of a suitable location for a new factory, and finally solved the problem of output, at least temporarily, by buying in a nearby town a second already established shoe factory, equal in size to the one they already owned.

It was now found that there was no difficulty in manufacturing in sufficient quantity to meet the demands of the trade. Indeed, the output was so great that the concern decided to establish a retail store in Boston, and thus sell directly to the consumer. Here again was expansion, but of another kind, for merchandising is a type of economic activity quite distinct in its nature from manufacturing, but carrying further the process of production.

⁷ *Ibid.*, p. 14.

Simple Horizontal Combination. When two or more business units operate under a central management, they comprise a form of organization that is called a "combination"; and when the several units are engaged in producing like commodities or rendering like services the coalition is known as *simple horizontal combination*. This situation is a common one, for "the size of the *firm* is not limited by the size of the *plant*; and the typical large manufacturing unit of today is a firm which owns, not a single gigantic factory, but a number of factories of considerable but not enormous size, possibly situated close together but quite possibly scattered over the face of a whole country or indeed of the whole world."⁸ In some lines of industry, it may be wiser to operate two similar establishments of only moderate size than to construct a single huge plant. This is true in sugar refining, in the smelting of iron ore, and in certain other lines of manufacture. Because these several plants are on the same industrial level, manufacturing uniform products, this type of centralized control is called simple horizontal combination.

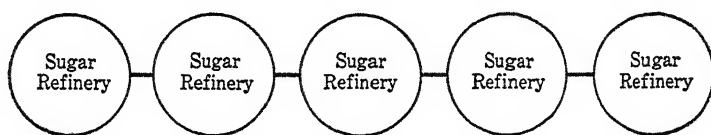


FIG. 4. SIMPLE HORIZONTAL COMBINATION

The grouping, under one management, of two or more establishments making *like* products.

Industrial establishments are frequently placed in particular localities because of special advantages in the way of raw materials, labor supply, or markets. Advantages such as these may lead to the operation of a number of plants of rather small size, instead of one very large establishment. Cheese factories, in order to secure raw milk cheaply, may profitably be scattered throughout a dairying region; silk mills of a single concern may be located in different cities for the purpose of discouraging concerted action by the workers; and brickyards are normally placed fairly near the prospective purchasers of the product. In each of the instances mentioned, however, unified control of a number of establishments may result in some of the economies of large-scale production. If so, combination is likely to take place.

Complex Horizontal Combination. The examples thus far given are of simple horizontal combination. But horizontal combination is sometimes complex. That is to say, instead of the several consolidated units manufacturing uniform products, they may engage in manufacture of different kinds. In some instances, there is an obvious relationship between

⁸ D. H. Robertson, *The Control of Industry*, New York, Harcourt, Brace & Company, Inc., 1923, pp. 21, 22.

the several products. When two or three articles, such as butter, cheese, and ice cream, are made from the same basic material, the situation may lead to *complex horizontal combination*. The combination is *complex* because the products turned out are not *like* but *unlike*.

A few more illustrations of complex horizontal combination may be given. "A large bakery operates a feed-mill, in this way utilizing the stale and faulty products not sold."⁹ A canning factory manufactures its own tin cans in a separate factory. Sometimes the connection between the articles produced seems rather remote. Professor Thorp tells of one concern that manufactures, in separate factories, billiard tables and phonographs; another, pianos and candy; and a third, mousetraps and silverware. Usually, however, a reasonable explanation of such combinations can be found if the history of the enterprises is investigated. Simple and complex horizontal combinations are shown graphically in Figs. 4 and 5.

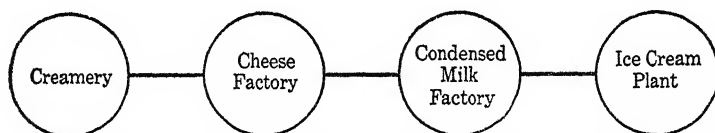


FIG. 5. COMPLEX HORIZONTAL COMBINATION

The grouping, under one management, of two or more establishments making *unlike* products.

Vertical Combination. *Vertical combination*, which is also known as *integration*, consists of the concentration, under one central office, of two or more manufacturing units operating on different stages, or levels, of production. The many industrial interests of the Fords provide an excellent illustration of the extent to which vertical combination may be carried on in present-day business. Following is a list of industries operated by the Ford interests, all of which are said to have contributed in some way to the manufacture of Ford automobiles:¹⁰

Acetone	Cement	Filtered water
Airplanes	Coal mining	Flax growing
Artificial leather	Coke manufacturing	Flour
Automobiles	Copper wire	Fordite
Automobile bodies	Cotton, woolen, linen	Forgings
Batteries	Dry kilns	Foundry
Benzol	Electric locomotives	Generators
Body parts	Electric power	Glass manufacture
By-products	Farming and stock raising	Iron mining
Car trucks	Fertilizer	Johanssen gages
		Lead mining

⁹ Willard L. Thorp, *The Integration of Industrial Operation*, p. 195.

¹⁰ L. P. Alford, *Laws of Management*, New York, Ronald Press Company, 1928, p. 60.

Logging	Printing	Small tools
Machinery manufac- ture	Products of hydro- electric power	Steam turbines
Motion pictures	Radio	Steel manufacture
Paper	Railroads	Toolmaking
Photography	Sawmills	Tractors
		Wood distillation

We shall not attempt to show in detail the part played by each of these forty-seven industries in the production of automobiles. But even a casual inspection of this list indicates the close connection of certain industries, and their probable contribution to the chief Ford product. Iron mining provides one type of raw material, logging and sawmills a second, and flax growing a third. These several items make progress through steel works, body plants, and textile mills, respectively. Power is an essential factor in manufacturing; hence the production of electric power and steam turbines. Coal is required for generating steam and is also the raw material for coke, which, in turn, is necessary in the smelting of iron ore. Transportation is carried on almost continuously in the Ford organization, and this fact accounts for the inclusion, in the Ford list, of electric locomotives and railroads.

A close familiarity with the Ford operations would doubtless enable one to find the specific places in the organization into which most of these forty-seven industries fit, and to explain the relationship of each to the whole. But it is probable that some one or more of the forty-seven would not fulfill the requirements of vertical combination, namely, that they represent a stage, or level, either behind or in advance of some other stage, and aid definitely in furthering the production of the finished article. The manufacture of by-products, to name but a single instance, is very likely to be purely incidental, a type of activity carried on to avoid waste, but not contributing to the manufacture of automobiles. A by-product factory, then, would be an example of complex horizontal combination in a scheme of things which is essentially vertical combination. The many assembly plants functioning under the Ford banner are instances of simple horizontal combination, since all are performing similar operations. Vertical combination is illustrated in Fig. 6.

Instances of Complicated Combination. We see, then, that in a single enterprise there may be expansion in several directions. When a single establishment has reached the maximum size for economical operation, it may spread out horizontally through the accession of one or more plants engaged in the same kind, or a different kind, of production. If the new plants engage in the same type of production, the organization is one of simple horizontal combination; if in different types, of complex horizontal combination. Finally, the enterprise may launch into *forward* or *backward* integration; the former, if the new establishment represents

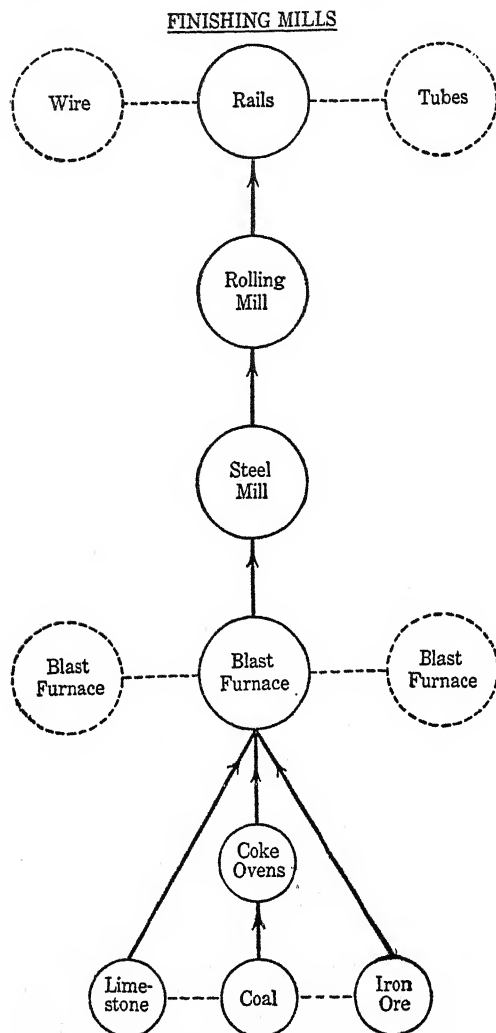


FIG. 6. VERTICAL COMBINATION, OR INTEGRATION

The grouping, under one management, of two or more establishments making *successive* products. (Vertical and horizontal combination may go together, as is indicated by the dotted lines in the diagram.)

stages of production closer to the finished article, the latter if they are nearer the raw material stage.

Some large-scale industries never reach the third, or even the second, step of development that we have outlined. Others, again, such as the United States Steel Corporation and the Ford Company, have expanded horizontally and vertically until their many and diversified interests seem to the outsider to form a veritable maze of complications. As an evidence

of the rapidity with which expansion sometimes takes place in this age of large-scale production, it may be mentioned that the Ford organization began operations in 1903 with a paid-in capital of \$28,000. Although additions to Ford capital have been made only from earned profits, it is estimated that the business is now worth more than a billion dollars.

INDUSTRIAL MONOPOLY

Large-scale production brings gains which, for the most part, are strictly legitimate, but combination sometimes results in conditions that are contrary to public policy. If, by increasing the size of a plant or combining a number of plants under one management, an enterpriser can reduce his costs of production, there should certainly be no objection on the part of the public. Indeed, it is entirely possible that the consumers will benefit through a reduction in the selling price of the commodity. But whether the price is reduced or not, there is little excuse for begrudging the enterpriser the gain that has come to him because of his superior ability in the field of production. Should he attempt, however, to make an artificially high profit by reason of a superior bargaining position, then indeed there may be reason for censure, and even for public interference.

A serious disadvantage of industrial combination from the point of view of public welfare is the possibility that an enterprise may grow to such vast proportions as to be dangerous. In other words, it may occupy so strong a position in its particular field as to undertake to dictate the terms on which consumers will be permitted to buy essential goods. Most of our economic theory assumes the existence of competition among the producers of a given commodity. It is assumed that manufacturer will compete with manufacturer, merchant with merchant, and so on; and that, in their eagerness to secure patronage, the competitors will offer their wares at lower and still lower figures, until finally a price based on costs of production is reached.

Some Hazards of Monopoly Control. But if control has passed into the hands of one or a very few enterprisers, they may put an end to competition, and consequently to any assurance of a price related to production costs. And now we arrive at the central idea of monopoly, which is *that degree of unified control over supply or demand which will permit the regulation of price*. We shall see, in our study of price determination, that a small amount of goods sold at a high price per unit may bring a greater net return than a larger quantity at a low unit price. By restricting output, then, the monopolist may add to his profits, but at the expense of the consumers, who will suffer in two ways: first, by having fewer goods to consume; and, second, by having to pay a higher price per

unit than would prevail if the output were not limited artificially by the monopoly.

It might, for example, be advantageous to the anthracite coal interests (pronounced a monopoly by the United States Coal Commission) to restrict their output and thus raise prices. But as a result, many who need coal would be compelled to go without, or to get along with an insufficient quantity, and persons of larger means would be required to pay an extremely high price. In like manner, a monopoly may work hardship through the control of demand. Tobacco growers have often charged that, because of concerted action on the part of the dominant tobacco manufacturers, the farmer has been obliged to sell his tobacco crop at a price dictated by the alleged monopoly—sometimes at less than the cost of production—since there was no other market for his product.

There is the further danger that a monopoly, in order to maintain its position of dictatorship, may seek by unfair methods to keep would-be competition out of the field, and thus obstruct the road to freedom of enterprise.

The Wastes of Competition. However, we must not give the impression that all monopolies are objectionable. It may be, as we so often hear, that "competition is the life of trade." But it is sometimes, instead, the death of trade, for if competition is too intense it results almost inevitably in ruinous price-cutting, which, if allowed to continue unhindered, leads to the bankruptcy courts. The public cannot afford, any more than the business man, to have business failures multiplied by "cut-throat competition," for, in the long run, it is the consuming public that pays the bill.

Moreover, competition often results in undue duplication of equipment and effort. A single waterworks, gas plant, or street railway can usually supply service at lower rates than could several units in each of these public utilities. Realizing this fact, we ordinarily grant a franchise (or monopoly right) to one concern, and demand that it render good service at a fair charge. To prevent abuse of the monopoly power that is thus set up, we often insist upon supervising the service and regulating the rates, through a public service commission which presumably represents the interests of the public.

Certainly, one important factor in bringing about monopoly is the desire to eliminate forms of competition that would make operation unprofitable. Another, as we have seen, is the hope of securing some of the advantages of large-scale production through an expansion of the business. Large-scale production, however, does not necessarily lead to complete monopoly, as witness the competition that exists between the Ford and General Motors companies. Of course, recognition of the legitimate reasons for the development of monopoly need not blind us to the fact that, once control is attained, there is grave danger that the rights of

the consumer will be forgotten in the desire for large profits. Hence the need for some sort of regulatory measures which will safeguard the interests of the public. We shall consider measures of this kind in Chapter 48 (Vol. 2).

1. "It is not surprising that we find in the corporate form of organization a number of very large concerns." Why should very large concerns adopt the corporate form of organization?
2. What standards of measurement may be used in judging the size of business units?
3. Show, by means of definite figures, the tendency toward large-scale business units in the United States.
4. Give an example (not taken from the text) of large-scale operation in (a) manufacturing, (b) merchandising, (c) transportation, and (d) finance.
5. What relation, if any, is there between large-scale production and economical production?
6. Why can supplies of various kinds be bought more advantageously by a large concern than by a small one?
7. Explain why large-scale producers are able to effect savings in transportation costs.
8. Why is a large business unit enabled to employ specialization to a greater extent than a small concern?
9. How does the adoption of large-scale methods lead to the wider use of the roundabout process of production?
10. Why do the best managers and technicians usually enter the field of large-scale production instead of accepting positions in small business units?
11. Why is it possible for large-scale producers to use materials that are often wasted by small producers? Illustrate.
12. Discuss the relationship between large-scale production and research.
13. Large-scale producers can market their goods more economically than small-scale producers. Why?
14. Explain, in some detail, why steel manufacture lends itself readily to large-scale production.
15. Distinguish between "essentially large-scale" and "essentially small-scale" industries, with illustrations.
16. In view of the growth of large-scale business, is the small-scale enterprise doomed to early extinction?
17. What, according to E. A. G. Robinson, is the "best" size for a business organization to adopt?
18. What are (a) horizontal combination, (b) vertical combination, and (c) integration?
19. Horizontal combination may be *simple* or *complex*. Distinguish between the two, with an illustration of each.
20. Explain what is meant by (a) "forward" and (b) "backward" integration.
21. The text mentions "the possibility that an enterprise may grow to such vast proportions as to be dangerous." Dangerous in what respects?

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The Risks of Production

UNCERTAINTY OF ONE KIND OR ANOTHER APPEARS TO BE A UNIVERSAL phenomenon. We are continually being forced to make decisions; and whenever there is a choice to be made between two or more possible courses of action, there is always a chance that the wrong one may be taken. No phase of human activity is wholly free from risk and uncertainty.

The Riskiness of Business. Uncertainty is ever present in the field of economic endeavor. There is always the possibility that either the demand for or the supply of economic goods will change in such manner as to affect, and sometimes seriously, the welfare of consumers or producers, or both. Every few years, for example, some thousands of Chinese suffer starvation by reason of famine in one or more sections of their vast country. On the other hand, American farmers sometimes go bankrupt because their crops of cotton or wheat bring less than actual costs of production, owing to the excessive size of the harvest and a consequent glut on the market.

Agricultural production is, of course, largely at the mercy of nature. Too little rain, or too much, destroys millions of bushels of grain, and a stretch of unseasonably cold weather ruins peach orchards and orange groves. Moreover, if nature is too bounteous the effect upon the producers is almost as disastrous as though she were niggardly, for exceptionally large harvests commonly mean losses instead of gains, because of the low prices that result. The hazards of agricultural producers, however, form but one of the many types of business risk. In manufacturing, merchandising, transportation, banking, and other branches of economic life, there are possibilities of loss. Indeed, it is doubtful whether one can find anywhere in the business world a form of productive activity in which there is not at least some element of uncertainty. It is the risks of economic producers with which we have to deal in the present chapter.

THE TIME RELATIONSHIP OF PRODUCTION AND DEMAND

The Problem of Fixed Capital. Some of the uncertainties of economic life are attributable to the fact that production today is usually very "roundabout," and is often highly specialized. The roundabout process

involves the use of large quantities of capital, both fixed and circulating; and some of the fixed capital purchased by the enterpriser today may be in use for a score or more years. With production spread over so long a period, the chances that there will be changes in productive methods, or in demand, are great.

It is possible that the capital in question will be productive to the very last, and it may even be of such a type that its value will increase as the years go by. In this case, the owner will enjoy a substantial margin of additional profit by reason of this increase. But it is equally possible that the kind of capital used will, long before it is worn out, be rendered obsolete and worthless through the invention of new processes, or changes in the desires of consumers; and in such event, a loss will be suffered. It is on this account that patents are sometimes bought up and then quietly shelved (instead of being utilized) until the enterpriser is able to put them into operation without what appears to him to be a premature "scrapping" of machinery that is still productive. In general, the longer the life of the capital, the greater is the probability of loss of this kind in place of gain.

Uncertainties Resulting from Specialization. Specialization also usually spreads production out over a considerable period of time. Not only does specialization divide work up among many persons, but it frequently calls to its aid producers in all parts of the world. If we attempted to trace the beginnings of a suit of clothes or a pair of shoes, we might easily find ourselves carried to a sheep ranch in Australia or a cattle range in Argentina. Producers of raw materials far and wide are going ahead with production in the hope, but with no certainty, that their goods will sell at a profitable figure. The same hope and uncertainty are shared by other specialists along the line of production, through whose efforts the raw stuff eventually becomes finished goods. It must be remembered that there is little or no correlation between these various specialists, and, in the absence of centralized control, it would be nothing short of a miracle if sellers desired always to sell at a given price precisely the amount that purchasers were willing to buy at that price.

What often happens is that when the product of all specialists of one type is brought together, the quantity of goods available at a given time is so small that producers are able to command a price materially above expenses of production; or, on the contrary, it is so large that they must accept for their goods less than full costs of production.

Production in Anticipation of Demand. Production, then, is carried on largely in advance of demand. Our reference to uncertainties resulting from the roundabout process gave some notion of the chances taken by business men who invest in fixed capital which they count on using for many years. But uncertainty attaches also to business projects that are completed in much shorter periods. Productive forces are set to work today on the manufacture of goods that will be ready for sale a few months

or a year hence. But will the work be accomplished as quickly or economically as the enterpriser anticipates? On this point he cannot be certain. The cost of raw materials, labor, and power may rise unexpectedly, and, if the enterpriser is producing on contract, he may have to deliver at a loss. If, as is more likely, he is producing "for stock" and not on special order, a strike of his employees, or some other unforeseen event, may so interfere with production, and so increase expenses, as to bring appreciable losses.

If our enterpriser is a farmer, he has to face the hazards of unfavorable weather, insect pests, and so on. There is always, therefore, the possibility that production may not measure up to the enterpriser's expectations—expectations which were perhaps entirely warranted by the conditions existing at the time his estimates were made.

Changes in Market Conditions. But marketing a product is often a more hazardous undertaking than making it in the first place. What assurance has the business man that the finished goods will be desired sufficiently by the public to enable him to dispose of them on satisfactory terms? The fact that production precedes demand brings into the situation a large element of uncertainty. Obviously, a given manufacturer will want to produce as much goods as he can sell at a profitable figure, but the problem of determining the amount is a serious one. He has, first of all, to try to predict the quantity of goods that the public will buy at a price high enough to cover all costs of production. Then he must undertake a most difficult task—that of estimating the quantity of the article that will be thrown upon the market by other producers.

Added to these difficulties is the possibility that the tastes of potential buyers will have changed by the time the goods are ready for sale, or that their purchasing power will have declined, with a consequent reduction in the quantity that can be sold. Fashions change, and sometimes very quickly, as witness past developments in automobiles, radio receiving sets, popular literature, women's costumes, coiffures, and so on. Extensive changes in the demand for goods sometimes spell ruin to a business man. The shift from wool to silk and rayon for women's dresses, the reduction in the quantity of material used, the serious decline in the sales of men's shoes, and the like, are examples of modifications in demand that have taken place, sometimes slowly and again suddenly, but in every case with a profound effect upon the fortunes of business men. The effect upon some enterprisers, it will be noted, is detrimental, and upon others beneficial. But the presence of chance in the marketing end of business is beyond question, and the losses, when they come, may fall upon either manufacturer or merchant, or both.

Who Are the Risk-Bearers? The owners of all the factors of production share, although unequally, in the uncertainties of economic life, unless methods of shifting the hazards are developed. The owners of land are

perhaps less liable than are capitalists, laborers, and enterprisers, to suffer loss through economic uncertainties. For land possesses a substantiality that makes its physical destruction improbable, and it is so essential to all phases of human existence that the demand for acres and square feet is more likely to increase than diminish. However, a person who rents agricultural land to another is always under the necessity of seeing to it that his tenant does not exhaust the fertility of the soil; and the owner of urban land sometimes finds his holdings "blighted" (or reduced in value), owing to shifts of business or residential districts to new locations. On the whole, it appears that the uncertainties attaching to land values work to the advantage of the owners; that is to say, rises in land values are much more frequent, and more extensive, than declines. This is true because the growth of population causes a steadily increasing demand for land while, at the same time, it is practically impossible to add to the total stock.

TABLE 6. FIFTEEN-YEAR RECORD OF BUSINESS FAILURES IN THE UNITED STATES, 1931-1945

(Source: *Survey of Current Business*, 1932 to 1946)

Year	Number of Failures	Aggregate Liabilities
1931.....	28,285	\$736,309,000
1932.....	31,822	928,313,000
1933.....	20,307	502,831,000
1934.....	11,724	230,198,000
1935.....	11,510	183,013,000
1936.....	9,185	147,253,000
1937.....	9,492	183,252,000
1938.....	12,840	226,504,000
1939.....	11,412	168,204,000
1940.....	13,619	166,684,000
1941.....	11,848	136,104,000
1942.....	9,405	100,763,000
1943.....	3,221	45,339,000
1944.....	1,222	31,660,000
1945.....	810	30,395,000

The owners of capital, in the main, bear a larger share of uncertainty than owners of land. Capital (such as factory buildings, machines, and tools) may be ruined by fire, flood, or other destructive forces; or its value may disappear wholly, or in part, as better forms of capital make their appearance. There is also the possibility of losing one's capital through fraud or lack of ability on the part of the enterpriser to whom it has been intrusted. The large toll of business failures listed in Table 6 is indicative of the fact that investors do take chances in lending their funds to business enterprisers. These uncertainties, as we shall see when

we study the distribution of income, form a part of the gross interest charge. Investors weigh, perhaps very inaccurately, the amount of risk involved in buying a certain bond or share of stock. The more hazardous the investment, the higher must be the interest rate on bonds or the dividends from shares of stock, if owners of funds are to be induced to put them into industry.

In the case of land purchase or capital investment, the uncertainty involved is assumed by the individual himself. He decides to "take a chance"; and the longer the chance, the greater must be the prospect of return if his venture turns out well. We may dismiss, thus briefly, these two types of economic uncertainty, and consider at greater length the more complicated hazards of the enterpriser, together with certain methods of handling the risks of production.

SOME SPECIFIC BUSINESS RISKS

The enterpriser, it will be recalled, is the person, or group of persons, that owns a business and consequently assumes the responsibility for its operation. It is to the enterpriser that the landowner looks for rent, the worker for his wages, and the capitalist for interest on whatever funds he has intrusted to the business man. The ability of the enterpriser to meet all of these claims depends not only upon managerial ability in the conduct of his business, but also upon the proper handling of business risks, to the end that these risks shall be rendered as slightly burdensome as possible. Indeed, if the enterpriser can go his competitors one better in the wise treatment of industrial hazards, he may find here a source of considerable saving, and hence of profit. We note, now, some of the specific risks of the enterpriser.

Land Title Risk. Let us assume that the enterpriser has purchased a business site for the erection of his factory. The land now appears to be his, but there is the possibility that, sooner or later, someone may turn up and challenge his claim to ownership of the property. To avoid the worry, inconvenience, and expense that would be entailed if a claimant of this kind should appear, the enterpriser may go to a title company, have a "search" made, and then, by making a small payment, secure a clear title to the land. He now has a guaranty of his ownership of the site and the assurance that any claim that may be brought against it will be fought by the title company. Moreover, should such claim be settled adversely to the enterpriser, he must be reimbursed by the company for any loss that he may suffer.

Property Risk. Once the plant is built and fully equipped, the owner may wish to avoid the loss that would be his if the property were destroyed by fire, earthquake, tornado, or other calamity. This he may do by shifting the risk to insurance companies whose business it is to

specialize in risk-bearing. Having paid the necessary "premiums" (the relatively small charges that are made for the service), he rests assured that should disaster of the specific kinds insured against befall him, his losses will be met by the companies that have insured him. It is possible, likewise, to insure raw materials, finished goods, and other forms of property against damage of various kinds.

Risks of Dishonesty. Insurance against theft, robbery, and burglary may also be purchased. One type of insurance, known as "suretyship," protects the business man against dishonesty on the part of his own employees. The process consists of "bonding" the employees up to a stated amount; thus the surety company becomes responsible for the peculations of the individual who has been bonded. It is the custom of many concerns to take out insurance of this kind on employees who hold positions of trust and responsibility.

Risks in the Purchase of Materials. All progressive business concerns now buy their materials on the basis of definite "specifications," which set forth the standards to which these materials must conform. Going one step further, they often test the materials in their laboratories when they have been delivered. In this way they avoid the possibility of inferior goods being foisted upon them.

Later in the chapter, under the heading "Constructive Speculation," we shall describe "deferred delivery contracts" and "hedging," which are employed by some business men as protection against price fluctuations that might result in losses.

Uncertainties in Production. Using the term "production" in the restricted sense of the creation of form utility, we may repeat the statement, made in an earlier paragraph, that there is a large element of uncertainty in this field of business activity. The task of estimating in advance the cost of producing a given quantity of goods is a difficult one. A printing house, for example, is asked to bid on a certain job of printing. In order to secure the contract in competition with others, a close estimate must be made. But when the job is completed, it may be discovered that the price quoted was too low because of (let us say) a lack of effectiveness on the part of labor, or a sudden advance in the price of paper or ink, or the temporary failure of an electric company to supply power, with a consequent enforced idleness of the pressmen.

Production of goods for stock also is subject to uncertainties. Some of the hazards of the productive process are being eliminated by the substitution of scientific management for the old rule-of-thumb methods. Work is being more carefully planned now than in the past; the productive powers of employees are better known; materials are purchased and stored in such manner as to lessen the probabilities of waste; and the whole process of production is under more complete control. As a single example of the gain in certainty to be realized through scientific manage-

ment, we may mention the use of time studies in predicting the effectiveness of labor. If adequate time studies have been made, it is possible to estimate with a high degree of accuracy just how much time will be required for the completion of a job, and the labor cost involved. In the absence of such studies, estimates of labor cost are naturally faulty. Through the development of exact knowledge to replace mere guesswork, at least some of the uncertainties of production can be removed.

Uncertainties in Marketing. Accurate knowledge may also be prescribed as the most effective remedy for uncertainties in marketing. It is no small undertaking to analyze a market and determine the sales possibilities of a given commodity. But unless a scientific analysis of the situation is made, it is next to impossible for an enterpriser to estimate satisfactorily how much goods he may reasonably expect to dispose of. In making an analysis of this kind, it is necessary to determine the class or classes of consumers that may be expected to purchase the commodity or service in question, the number of consumers in each class, and hence the number of potential buyers under normal conditions. Factors that play a part in the making of a market are the purchasing power, living conditions, occupations, racial characteristics, climatic conditions, and numerous other influences affecting the different classes of consumers.

But knowledge of abnormal conditions also is important in connection with avoiding marketing hazards; and the desire of business men for advance information on business fluctuations has given rise to the development of business forecasting, as practiced by such organizations as the Harvard Economic Service and the Babson Statistical Service. On the theory that history repeats itself, these "services" have been established to make careful studies of the volume of production (particularly in iron and steel), price movements, banking activities (including interest rates), stock market conditions, business failures, and other data which are thought to indicate business trends. On the basis of these studies business forecasts are prepared and sold to those who are sufficiently interested to pay the price. It is thought by some economists that information of this kind will eventually be quite effective in lessening uncertainties in both production and marketing.

Business Risks and Profits. We have sketched a sufficient number of business uncertainties to show clearly that they are many and great. There is a tendency, on the part of progressive business men, to eliminate or lessen their hazards through the adoption of more scientific business methods, as in the handling of men and materials, and the development of better marketing practices based on statistical data. Of the risks that cannot be done away with or reduced appreciably, some are shifted to insurance companies; others, again, must be borne by the enterpriser himself. For, as Professor Marshall points out, "no insurance can be effected against the great majority of business risks. For the greater part

of business risks are so inseparably connected with the general management of the business that an insurance company which undertook them would really make itself responsible for the business; and in consequence every firm has to act as its own insurance office with regard to them."¹

Many of the uncertainties that cannot be insured against arise because goods are produced in advance of demand. The unpredictable changes that take place may result in a surplus remaining after all necessary expenses of production have been met. This surplus is known as "profit," and will be dealt with in a later chapter. But it is equally possible that there may be a deficit after all costs of production have been paid. It is held by some that there is a tendency for profits and losses to equal each other and cancel out over a long period of years. It is certainly true that unless the profits of a given concern are, in the long run, at least as great as its losses, the concern must go down in defeat.

Risks of Industrial Workers. It is peculiarly the function of the enterpriser to assume business risks. But a recognition of the enterpriser's responsibility in this connection must not be allowed to obscure the fact that industrial workers also have a large stake in the business to which they give their time and efforts. In Chapters 25 and 26, dealing with the general subject of economic insecurity, we shall indicate certain risks that fall to the lot of workers in modern industry, together with some methods that have been devised for meeting these risks.

INSURANCE

We have referred so often, in our discussion of business risks, to transferring the hazards to specialists in risk-bearing, that it seems desirable to give some attention to the principles and practice of insurance and speculation.

The Nature of Insurance. Insurance is a cooperative arrangement by means of which the losses resulting from a given type of risk are shared by many persons who might be affected adversely by this risk, instead of being borne by the relatively few upon whom the blow actually falls.

Through the medium of insurance, the financial loss caused by the destruction of a house by fire, of an automobile by collision, or of earning capacity by death or disability, is met by "benefits" paid from a fund accumulated for the purpose. This fund is the result of *small* payments ("premiums") being made by *all* who are insured against the hazard in question. In this way, funds are collected and paid out in such manner that each member of the group pays his share of the *total* losses inflicted upon the group by the hazard insured against, and the cost to the individual member is relatively slight.

¹ Alfred Marshall, *Principles of Economics*, New York, The Macmillan Company, 1930, 8th ed., p. 398.

The Basis of Insurance. *Large numbers* and *reliable statistics* are requisites of a successful insurance plan. Uncertainties that are not calculable for individual instances may be estimated with considerable accuracy when a large number of cases is dealt with. For example, statistics collected over a long period of years give a good idea of the probable death rate among the members of a large group. Just which of the million policyholders of an insurance company will die within the year cannot be foretold, but the *number* that will fail to survive can be predicted with surprisingly slight error. It is the business of actuarial experts to estimate *how many* (but not which *particular individuals*) among those insured against risks will suffer from fire, burglary, automobile accidents, and other disasters and, as a consequence, will demand benefits as agreed upon in the insurance policy.

We see, then, that there is safety in numbers, and that, by combining a great many individual uncertainties, the *possibility* of loss for the individual is converted into a *certainty* of loss for the group. This certain and predictable loss is distributed among the insured on the basis of the amount of protection each is carrying, and a charge is made to cover administrative costs. By paying a small sum, a person may make monetary provision against any of many types of hazard. For example, by paying an annual premium of approximately \$20.00, a man thirty-five years of age may make certain that upon his death his beneficiary will receive the sum of \$1000.

A Reduction in Uncertainty. Insurance takes many forms and covers a large number of hazards. But in all cases, it should be noted, the insured disposes of the uncertainty by accepting a small definite loss (the premium payment) in order to relieve himself of a loss which may never come to him, but which, if it should come, would be very burdensome because of its size. Nor does the insurance company itself run any great chance of loss. For if its statistics have been calculated correctly, the receipts from premiums should be adequate to take care of all benefits that must be paid. Indeed, if they should prove to be inadequate, larger premiums will be demanded in the future, as was the case recently in Philadelphia, when rates for automobile insurance advanced sharply because of an increase in the number of automobile accidents among policyholders. It may be said, then, that insurance is a means of reducing *uncertainty*, though it does not necessarily lessen the number of *losses*. Through the use of statistics and the application of the law of large numbers, that which has been highly uncertain is turned into a fairly sure thing.

Insurance and the Reduction of Loss. But insurance may, and sometimes does, bring about a positive reduction in losses. For the payment of premiums is irksome to policyholders, and premium payments may

be reduced in amount if the hazards insured against are lessened. That they can be lessened in many instances is beyond question. Thus life can be lengthened by proper attention to the laws of health; fire hazard can be reduced through the introduction of sprinkler systems and adequate fire-fighting apparatus; robberies can be lessened by the installation of burglar alarms and the development of better police protection, and so on.

Indeed, some of our leading authorities on the subject regard the reduction in loss as the most significant service performed by the institution of insurance—important though it is to relieve individuals, through group action, of hazards that they are unable personally to assume. Though spreading a loss by means of insurance is better than having it borne by an individual, the reduction or elimination of the loss is still more desirable. The fact that insurance appears to aid in the good work of reducing losses is an additional reason for employing the insurance principle in handling all business risks to which this principle seems to be applicable.

CONSTRUCTIVE SPECULATION

We have spoken of deferred delivery contracts and hedging as devices which the business man may use to protect himself against price fluctuations in the purchase of materials. These two operations are a part of the larger subject of speculation. Speculation consists of "dealing in things the future prices of which are eminently uncertain."²

Commodity Exchanges. We shall confine our attention very largely to dealings which take place in the commodity exchanges, for it is here that we see most clearly the constructive function that speculation may perform. The most important of these exchanges are those associations of dealers in large cities that provide a continuous market for cotton, wheat, sugar, corn, coffee, and other types of commodities. If a commodity is to be handled in an organized market, it must be capable of standardization so that quantities and qualities may be expressed readily; it must be important enough to occupy the attention of many buyers and sellers; and it should, moreover, be liable to considerable fluctuations in price. The two commodities that meet these conditions most fully in this country are wheat and cotton.

"Cash Contracts" and "Futures Contracts." The members of a commodity exchange stand ready to enter into either *cash contracts* or *futures contracts*. A cash contract may be a "spot" transaction (in which case delivery is made at once) or a "deferred delivery" contract (with delivery to be made on a specified future date). The contracting parties are per-

² Alfred Marshall, *Industry and Trade*, London, Macmillan and Co., Ltd., 1920, p. 252.

sons whose business it is to sell and buy, and actually *deliver* and *accept*, the commodities in which they deal. It is important to bear in mind that *the cash contract is fulfilled by actual delivery of the commodity contracted for*.³

This is not true of futures contracts. "A futures contract may be defined as a contract for the sale of a stipulated amount of a specified grade of some commodity at a fixed price at a future date."⁴ This sounds very much like the deferred delivery contract mentioned above, but its object and operation are quite different. The purpose of the futures contract is not to dispose of or get possession of physical commodities, for "in the purchase or sale of a future, it is the exception rather than the rule for the contract to be fulfilled by actual delivery."⁵ The speculators who enter into futures contracts are interested not in the commodities themselves, but merely in the profit they hope to reap through these market transactions. Consequently, when the time for delivery arrives, it is the usual procedure to "settle" by paying or receiving (as the case may be) the difference between the contract price and the market price prevailing on the day on which the terms of the contract must be met.

If, then, a seller of wheat agreed to deliver on April 1 at 90 cents, and the market price on that date turned out to be 80 cents, he would collect from the buyer 10 cents a bushel, this amount representing the profit he would make if he fulfilled the contract and actually delivered the wheat. If, on the other hand, wheat were selling at \$1.00 on April 1, the seller would be required to pay the buyer 10 cents on each bushel contracted for. It may be said, therefore, that futures transactions are in effect wagers as to whether the price will rise or fall. But in many instances these "bets" are based on careful estimates of extremely able business men who give their entire time and attention to the study of world conditions of supply and demand, and then back up their deliberate judgments with hard cash.

Buying "Deferred Deliveries" to Shift Risk. Our special interest, however, is in the use of speculation as a means of handling business risks. We may take, by way of illustration, the familiar example of the miller who, through dealings in the wheat exchange, protects himself against fluctuations in the price of wheat.

Let us suppose that the miller has been asked by a baker to quote in advance on the delivery of 100 barrels of flour each month, over a period of six months. We may assume, further, that the miller's productive capacity is 100 barrels a month, and that he wishes to buy his wheat

³ G. Wright Hoffman, *Future Trading and the Cash-Grain Markets*, Washington, United States Department of Agriculture, Circular No. 201, January, 1932, p. 7.

⁴ Charles O. Hardy, *Risk and Risk-Bearing*, Chicago, University of Chicago Press, 1923, p. 205.

⁵ G. Wright Hoffman, *Future Trading and the Cash-Grain Markets*, p. 7.

as he needs it for milling into flour. How, in view of possible changes in the price of wheat, can the miller make a contract, some months in advance of delivery and at a specified figure, without running considerable risk of loss? (For his raw material, wheat, may have risen in price as he seeks, month by month, to secure the amount required to fulfill his contract.)

The problem would be a difficult one in the absence of a wheat exchange. But the existence of such an exchange enables the miller, today, to place orders for wheat to be delivered each month at prices quoted today for future delivery. Thus, the cost of the miller's raw material is definitely known, and he may use this figure as the basis of his quotation to the baker, secure in the knowledge that by buying for deferred delivery he has insured himself against possible price fluctuations that are wholly beyond his control. Having shifted a particular hazard to a specialist in risk-bearing (a speculator), he is able to give his undivided attention to the task of milling flour, in which he is himself a specialist.

"Hedging" to Shift Risk. But the glove may be on the other hand, the miller wishing to manufacture for stock, turning wheat into flour day by day, in order to keep his employees busy and to have on hand at all times sufficient flour to meet the needs of his customers. In this way, his production may regularly be a month in advance of sales. But the selling price of flour, when it is finally disposed of, will usually be based on the cost of wheat *at that particular time*, and not upon its cost at the time the wheat was actually purchased. How, under such conditions, can the miller guard against a drop in the price of wheat and a consequent loss in revenue from the sale of his flour? He may do it through the process known as "hedging," which involves the simultaneous purchase of physical wheat for immediate delivery and the sale of wheat futures.

Let us imagine, for the sake of simplicity, that the miller manufactures every month 10,000 barrels of flour to be sold on the first day of the following month. If five bushels of wheat make a barrel of flour, the miller on January 1 will buy from a dealer in grain 50,000 bushels of wheat at (say) \$1.00, to be milled in the course of the month. At the same time, in order to make a perfect hedge, he sells in the futures market, for delivery on February 1, 50,000 bushels of wheat at \$1.00. Now, whatever may happen to the price of wheat during the month of January, he will find that his hedging operation has protected him against loss resulting from fluctuations in wheat prices. The transaction of January 1 is as follows:

January 1

Miller buys 50,000 bushels of physical wheat at \$1.00 per bushel.

January 1

Miller sells 50,000 bushels of futures wheat at \$1.00 per bushel.

On February 1, wheat may be selling at \$1.05 per bushel, in which case the following situation exists:

February 1

(Wheat selling at \$1.05)

Miller sells flour at a price based on \$1.05 wheat, though his wheat actually cost only \$1.00 per bushel. Hence, he *gains* 5 cents per bushel, or \$2500.

February 1

Miller delivers at \$1.00 (the contract price) wheat which actually costs him \$1.05, or pays the difference to speculator. Hence, he *loses* 5 cents per bushel, or \$2500.

Or wheat may be selling at 95 cents on February 1, with these results:

February 1

(Wheat selling at 95 cents)

Miller sells flour at a price based on 95-cent wheat, though his wheat actually cost \$1.00 per bushel. Hence, he *loses* 5 cents per bushel, or \$2500.

February 1

Miller delivers at \$1.00 (the contract price) wheat which he buys on February 1 at 95 cents, or receives the difference from speculator. Hence, he *gains* 5 cents per bushel, or \$2500.

This illustration shows that, by hedging, the miller has denied himself the profit which would have been his if, in the absence of a hedge, the price of wheat had advanced. But he has likewise insured himself against a possible decline in the price of wheat which would have entailed a loss. When the miller hedges, therefore, *his gains consist of the normal gains to be realized by manufacturing wheat into flour*. They are, in a word, precisely as much as they would be if the price of wheat were never-changing. Indeed, the miller's object in hedging is to render himself immune to any price changes that may take place.

The "Imperfect Hedge." We have said that a perfect hedge—one which completely eliminates loss or gain through fluctuations in the price of raw materials—is possible only when the *cash* and *futures* prices are identical. But it is quite possible to make a limited hedge when these two prices vary.

Let us suppose, for example, that when the miller buys physical wheat at \$1.00 on January 1, he finds that the price of February futures is 95 cents. Any hedge for a month he now enters into will involve the loss of 5 cents a bushel, as we may see from the following statement:

January 1

Miller buys 50,000 bushels of physical wheat at \$1.00 per bushel.

January 1

Miller sells 50,000 bushels of futures wheat at 95 cents per bushel.

If, on February 1, wheat should be selling at 92 cents a bushel, the miller would find himself facing the following situation:

February 1

(Wheat selling at 92 cents)

Miller sells flour at a price based on 92-cent wheat, though his wheat actually cost \$1.00 per bushel. Hence, he *loses* 8 cents per bushel, or \$4000.

Net loss on hedging transaction, \$2500

If the February 1 price of wheat should be \$1.05 instead of 92 cents, the effects upon the miller's fortunes would be the same, as witness:

February 1

(Wheat selling at \$1.05)

Miller sells flour at a price based on \$1.05 wheat, though his wheat actually cost only \$1.00 per bushel. Hence, he *gains* 5 cents per bushel, or \$2500.

Net loss on hedging transaction, \$2500

However, if the February futures price should be higher than the January cash price (say, \$1.05 a bushel as against \$1.00), the miller is bound to gain 5 cents a bushel if he hedges, regardless of the cash price prevailing on February 1, as is shown in the following illustrations:

January 1

Miller buys 50,000 bushels of physical wheat at \$1.00 per bushel.

January 1

Miller sells 50,000 bushels of futures wheat at \$1.05 per bushel.

First, let us suppose that the February 1 cash price of wheat is 95 cents.

February 1

(Wheat selling at 95 cents)

Miller sells flour at a price based on 95-cent wheat, though his wheat actually cost \$1.00 per bushel. Hence, he *loses* 5 cents a bushel, or \$2500.

Net gain on hedging transaction, \$2500

Finally, if wheat were selling at \$1.10 on February 1, this hedging transaction would still yield \$2500 of gain, as appears below:

February 1

(Wheat selling at \$1.10)

Miller sells flour at a price based on \$1.10 wheat, though his wheat actually cost only \$1.00 per bushel. Hence, he *gains* 10 cents per bushel, or \$5000.

Net gain on hedging transaction, \$2500

February 1

Miller delivers at 95 cents (the contract price) wheat which he buys on February 1 at 92 cents, or receives the difference from speculator. Hence, he *gains* 3 cents per bushel, or \$1500.

February 1

Miller delivers at 95 cents (the contract price) wheat which actually costs him \$1.05, or pays the difference to speculator. Hence, he *loses* 10 cents per bushel, or \$5000.

February 1

Miller delivers at \$1.05 (the contract price) wheat which he buys on February 1 at 95 cents, or receives the difference from speculator. Hence, he *gains* 10 cents per bushel, or \$5000.

February 1

Miller delivers at \$1.05 (the contract price) wheat which actually costs him \$1.10, or pays difference to speculator. Hence, he *loses* 5 cents per bushel, or \$2500.

The fact that most hedges are *imperfect* rather than *perfect* does not mean that they fail to perform a useful function. As our several illustrations have demonstrated, the hedge does eliminate the *uncertainties* of the situation. If the miller makes a perfect hedge, he is in the same position as though the cost of his raw material remained always fixed. If the futures price of wheat is *lower* than the cash price, he must include among the costs of production this *known, definite*, additional expense; and if the futures price is *higher* than the cash price, he may safely depend upon the futures *gain* to offset a part of his costs of production. In any case, he has substituted *certainty* for *uncertainty* by hedging, and thus is enabled to carry on his business without worry about unpredictable changes in the price of his raw material.

Social Gains Through Speculation. Whether or not the speculator performs a useful function in the economic world is a question that is often raised. Without attempting to give a detailed answer, it may be said for professional speculators that they shoulder risks which they are better able than others to bear, thus relieving many producers (such as our miller) of burdens which the latter are ill-prepared to carry.

Their operations lead, moreover, to a greater uniformity in both the use and the price of a given commodity, and this must be reckoned as a social and economic gain. The grain speculator, for example, learning that crop failures in certain parts of the world will bring a shortage of wheat, immediately seeks to buy contracts for the future delivery of wheat, and his activities raise the price. As a result of his purchases and those of other speculators, the price of wheat is moderately high over a long period instead of being low for a while and extremely high at a later time.

The rise in price has the further beneficial effect of aiding in the conservation of the available stock of wheat. Were prices to remain low, the consuming public would be unaware of the necessity of economizing, bread would probably continue to be wasted, and something approaching a famine might be experienced before the coming of another harvest. High prices (resulting from the speculators' activities and passed on to the public by the sellers of bread) serve as danger signals; and thus the physical commodity itself, as well as the price, is spread fairly evenly over the period of shortage. In case the speculators anticipate an unusually large supply, they force down the price through their sales of futures. In this way they encourage the public to consume the article in larger quantities, again spreading its use over the period in question and contributing also to price stability.

Stock Speculation. Speculation in stocks, as practiced on the New York Stock Exchange and other exchanges in this and foreign countries, seems to many to be much less useful socially than speculation in commodities. And yet speculation in stocks does provide a "continuous

market" for securities and thus makes it possible for the general public to participate more fully in the ownership of industry. Moreover, it is probable that speculation in stocks does something to prevent violent changes in the prices of securities by anticipating changes in the conditions of a given concern or of business in general.

It cannot be denied, however, that in both stock exchanges and commodity exchanges there is a certain amount of dealing that savors of gambling, as well as some manipulation designed to mislead the unwary. In a later chapter we shall deal briefly with recent legislation designed to prevent the sale of fraudulent securities. Without attempting to minimize the harm that is chargeable to the organized exchanges, we should recognize the fact that they also confer benefits upon society; and we may leave the subject with the observation of Professor Marshall to the effect that "for the present at least that evil [which is attributable to speculation] has to be taken with the good."

1. Some of the uncertainties of economic life are attributable to the fact that production today is usually very "roundabout." Explain.
2. In what way does specialization lead to an increase in business hazards?
3. What is the relation between uncertainty and the fact that production is carried on in anticipation of demand?
4. Who are the risk-bearers in economic society?
5. What kinds of uncertainties are borne by business enterprisers?
6. Indicate the manner in which several types of risks of business enterprise may be lessened or shifted.
7. How may scientific management be used to reduce the hazards of doing business?
8. "Accurate knowledge may be prescribed as the most effective remedy for uncertainties in marketing." What kinds of information are useful in this connection?
9. Alfred Marshall says that "no insurance can be effected against the great majority of business risks." What, then, can be done about them?
10. In what way are "profits" and "losses" related to business uncertainties?
11. What part do statistics play in the insurance business? Could this business be conducted safely without the use of statistics?
12. Through insurance, "the possibility of loss for the individual is converted into a certainty of loss for the group." How, then, does insurance help to lessen hazards?
13. What are "premiums" and "benefits"?
14. When a man takes out insurance, he accepts a definite loss in order to relieve himself of a loss which may never come to him. Thus stated, insurance sounds like a very poor investment. Explain the "catch" in the statement.
15. The insurance company itself does not run any great chance of loss. If it relieves its policyholders of risk, how can the company avoid bearing the risks itself?

16. What is "speculation"?
17. Distinguish between the "cash contract" and the "futures contract."
18. What is the purpose of "hedging"?
19. Describe the process of "hedging."
20. Can speculation be justified from the social point of view? Explain.

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Waste in Production

A GREAT DEAL HAS BEEN SAID AND WRITTEN IN PRAISE OF AMERICAN BUSINESS. We hear much about the efficiency of production in this country. We read from time to time about improved methods of manufacture. And we see in books, magazines, and newspapers, imposing figures of exports from the United States to foreign countries—exports which, we are told, represent goods that Americans have made over and above those required for their own use.

Most textbooks on economics, also, tend to emphasize the possibilities of our present-day productive methods. Descriptions are given of measures that have been adopted to increase the effectiveness of man's efforts to convert raw materials into consumers' goods. These measures include the use of the roundabout process of production, strict attention to the most economical arrangement of the productive agents, specialization in its various forms, and, in some instances, the adoption of large-scale methods.

But we must not give the impression that all is efficiency in American business circles, for such an impression unhappily would be erroneous. To avoid presenting a distorted picture of the situation, we shall point out in the present chapter certain shortcomings of our business enterprises which result in a very serious economic loss to individuals and society as a whole, and to the present and future generations.

The Nature of Waste in Production. Writers on economic principles usually define production as the creation of utility, and discuss in some detail the several types of utility—*form, place, time, possession, and service*—which are being created constantly by our great army of workers. Efficiency in production demands that these workers shall be kept employed steadily, and that the conditions under which they work shall be such as will enable them to make the most of the land and capital with which their labor is combined in making, transporting, storing, and selling goods, or in performing some other act of production.

Success in production depends upon the possession of knowledge of the best methods of production, whether in manual work or in management, and upon translating that knowledge into action. Land, labor, and capital are scarce agents of production. Whenever any of these agents is allowed to go idle, being wholly or partly unused, there is economic waste. Whenever business men are ignorant of or for some reason fail to apply the best-

known methods of production, there is waste. Whenever productive agents are used in a way which yields a smaller return in output than could be had through some other use of these agents for the same length of time in the same field of production, there is waste. And whenever a valuable, irreplaceable natural resource (such as coal) is used when a relatively inexhaustible resource (such as water power) would serve equally well, obviously there is waste. We may define waste in production, then, as *any economic loss suffered by society through the inefficient use of factors of production, or through the failure of enterprisers to use certain of these factors when, from the social point of view, it would be economically wise to do so.*

Professor John A. Hobson and other writers have argued that some enterprisers indulge in waste through the production of goods which are socially undesirable, and which therefore constitute "illth" instead of wealth. This is a matter which we cannot undertake to discuss at this point, though it will receive attention in later chapters.¹ We are here concerned primarily with the efficient production of whatever goods are turned out, and not with the way they may affect society when they are consumed. Judging purely by our definition of waste in production, we should have to commend the producer of illth, provided he produces efficiently; while at the same time we should be obliged to condemn the producer of much-needed goods, if he is less efficient in his methods than the best enterpriser in his particular field of activity. For the problem of waste in production is solely one of the unwise utilization of the agents of production—land, labor, and capital.

Conflict of Individual and Social Interests. In many cases, a reduction in waste in production results in both individual and social gain. When, for example, an enterpriser lowers his costs of production through the more efficient use of coal, he not only adds to his personal profit but also promotes the conservation of an important natural resource. But there are instances in which productive methods, though socially wasteful, may be individually profitable. It may pay the owner of oil land to drill and pump feverishly to obtain oil which would otherwise be secured by owners of adjoining plots of land, just as it may pay a monopolist to restrict his output in order to charge an artificially high price for his product. But if the oil man thus renders impossible the *total* maximum production of oil from this field, as he may easily do, and if the monopolist in practicing restriction allows machinery and labor to go idle, both of these producers are clearly engaging in anti-social acts; for, judged by the standards set up in our definition, both are indulging in waste in production. In such instances, as always in the study of economics, we are bound to take the social point of view and to condemn self-seeking individuals for their unsocial actions.

¹Chaps. 27 and 30.

SOME MAJOR EXAMPLES OF WASTE

We shall now make a brief, and necessarily a very incomplete, survey of the waste of land, labor, and capital in some of the more important phases of economic life. Unfortunately, we have almost nothing to offer in the way of *exact data*, for the reason that such data are not to be had. The field is so huge and so varied that we can never hope to secure complete information on the extent of waste in production. But the figures that we present are as good as any that are obtainable. They are, it should be said, *careful estimates* made by men who have given much study to the matter. And even if they are only "enlightened guesses," they are nevertheless sufficiently accurate to give a fair idea of the serious problem which we, as a society, face. With this word of explanation, we proceed to an examination of certain types of waste in production.

The Waste of Land

Land is defined by the economist as natural resources created without the assistance of labor. Since land is synonymous with natural resources, we shall concern ourselves, in the present section of the chapter, with examining the wasteful exploitation of some of our important natural resources. Over the extent and solidity of land, and over climate, man has little or no control; but in the case of properties of the land such as minerals, water power, natural vegetation, and soil fertility, he has it within his power to use them wisely or unwisely.

The importance of using natural resources economically, instead of wastefully, will be apparent when it is remembered that production consists, in large part, of converting natural resources, directly or indirectly, into consumers' goods. If, then, there should come a time when we have completely exhausted our stock of natural resources, we shall also be through with the production of consumers' goods.

Coal. One of our most important natural resources, because of its use in producing power and heat, is coal. We have in mind, of course, not anthracite or hard coal, but the bituminous or soft coal of which we use 600 million tons a year, and upon which we depend to drive our locomotives, generate much of our electricity, provide coke and its by-products, and turn the wheels of an overwhelming majority of our industrial machines. And yet we treat this great natural resource as though we possessed unlimited quantities of it.

We have it on the authority of experts that for every ton of bituminous coal that is brought to the surface, another ton is left in the ground, forever beyond reach.² The cause is faulty mining. Apparently with no

² C. G. Gilbert and J. E. Pogue, *America's Power Resources*, New York, D. Appleton & Company, Inc., 1921, p. 20.

thought for the probable needs of future generations, most operators of soft coal mines practice "creaming the mine," which consists of following the rich seams of coal, taking out only that which is readily accessible, and abandoning the mine before the lean seams have been worked. After a time, the roof of the mine falls in, and what would once have been a somewhat difficult task of mining becomes virtually impossible. Systems of leasing which prevail in mining are also partly responsible for the neglect of thin seams and other high-cost areas; for the leases often call for the removal of a specified quantity of coal each year, and hence encourage the mining of those parts of the mines that may be most easily and cheaply exploited.

In the use of bituminous coal, once we have delivered it at the boiler room, we are exceedingly wasteful. According to the late Charles P. Steinmetz, the "electrical wizard," we lose three-quarters of the power and heat of every ton of coal that we burn, through faulty utilization. Another estimate is to the effect that "the average steam plant uses eight times as much coal per unit of power generated as does the most efficient plant";³ and in the opinion of Mr. Stuart Chase, "two tons are being burned where one or less would suffice."³ All in all, it seems very likely that if we set ourselves seriously to the task of conserving coal we could, by employing the best-known methods of mining and utilizing coal, satisfy our present needs and yet reduce the drain upon our stock of this natural resource by at least 75 per cent.

Both anthracite and bituminous coal are used in heating houses and other buildings. According to a 1942 report by Dr. William A. Hamor, Associate Director of the Mellon Institute of Industrial Research, home owners and the operators of apartment houses and office buildings could save more than \$150,000,000 in fuel bills each year through proper maintenance of furnaces and more efficient firing methods. This report added that if the dwellings erected during the next ten years were properly insulated there would be an annual fuel saving of \$125,000,000 to the owners.

Petroleum. The importance of petroleum has been brought home to us by the development of the internal-combustion engine, with gasoline for fuel, which during the past few decades has played so vital a part in both peace and war. Petroleum is of great significance, also, as the source of a score or more useful commodities, including kerosene, benzine, naphtha, asphalt, and paraffin. It provides us with most of our lubricating oils—a matter of prime importance in a machine age. And petroleum, in a relatively crude state, is being used in increasing quantities as fuel for locomotives, steamships, and industrial plants, and for purposes of domestic househeating.

³ Stuart Chase, *The Tragedy of Waste*, New York, The Macmillan Company, 1926, p. 242.

Our record for waste is even worse in the exploitation of petroleum than in the mining of coal. Because petroleum collects in underground "pools," spreading over wide areas, it is possible for a landowner, by drilling into the pool, to secure not only the oil immediately under his own property but also—if not interfered with—much of that which lies under surrounding acres, since it will tend to flow or seep through the sand toward the outlet. On this account, the discovery of oil is the signal for all landowners to start drilling at once, in the hope of getting the oil out of the ground before others capture it.

The inevitable result is a needless multiplication of wells and derricks, waste in the form of excess labor, and, worst of all, gross interference with the proper extraction of the petroleum from the land. Engineers say that for the proper drainage of the oil there should not be on the average more than one well for every eight acres of land. But in many instances there is a productive well for every two acres, and sometimes the wells are so close together that the derricks seem almost to touch one another. Because of faulty technique in exploiting our oil fields, it is probable that "for every barrel of oil produced three barrels or more are left underground, or wasted in well operation."⁴ This waste has been caused by the failure to apply the best methods of production that have been developed. Says the Director of the Bureau of Mines: "We have been wasteful, careless and recklessly ignorant. We have abandoned fields while a large part of the oil was still in the ground. We have allowed tremendous quantities of gas to waste in the air. We have let water into the oil sands, ruining acres that should have produced hundreds of thousands of barrels of oil."⁵ And as a consequence of these and other practices it seems certain that we lose a half-billion (and possibly a full billion) barrels of petroleum a year, which we could save if only we did the best we know how to do.

Fortunately, our *utilization* of petroleum is not so wasteful. Indeed, we are probably as efficient in the field of oil-refining as in any of our great manufacturing enterprises, and far more efficient than in most. Refining is in the hands of a relatively small number of large companies, in striking contrast to the widespread ownership of oil lands. These companies, for the most part, have established research laboratories which are constantly improving the technique of refining; and as better methods are developed they are adopted rapidly throughout the industry. Here, then, is one bright spot in an otherwise gloomy picture of inexcusable waste.

Natural Gas. Closely related to petroleum, in both its occurrence and economic importance, is natural gas. Those who live in regions where this great natural resource is plentiful are well aware that it is both useful and cheap. It is in many respects better than artificial gas made from coal, and is particularly suitable for domestic purposes. And yet this

⁴ *Ibid.*, p. 248.

⁵ Quoted in *ibid.*, p. 251.

valuable natural product is allowed to blow off into the air to the extent of some 600 billion cubic feet a year, according to reliable estimates. In this way we waste approximately as much natural gas as we utilize. Translated into terms of present average Philadelphia prices for artificial gas, the loss is about \$450,000,000 a year. This loss is very largely attributable to our faulty exploitation of petroleum; and much of the waste of petroleum results from the premature escape of natural gas. Hence, if we used scientific methods of oil production, we should at the same time reduce materially the loss that we now suffer through the waste of natural gas.

Water Power. The possibilities of water power for supplying the power, heat, and light needs of the people of this country have been greatly exaggerated. Theoretically, we could increase enormously the amount of electrical power generated by means of falling water, but practically there are very real limits to the extent of such increase. For practical purposes, we should not consider as available for water-power production any streams which cannot be relied upon to provide a steady supply of electric current, nor should we estimate the power possibilities of a stream at an output greater than the minimum which it may be counted upon to generate continuously throughout the year. Furthermore, we should exclude from our calculations the water-power potentialities of those regions which are so remote from centers of population that the current which they might generate could not find purchasers. There are, of course, many excellent streams in mountainous areas which must be ruled out, at least for the present, on this account.

Nevertheless, the fact remains that we have in the United States water-power resources which, from the social point of view, should be developed and put to work. According to estimates of the National Resources Committee, we had in this country, in 1938, the potentialities for generating some 85 million horsepower from water; and of this amount we were utilizing slightly more than one-sixth. It seems fair to say, therefore, that we could if we wished secure almost 70 million additional horsepower by harnessing our streams and thus expanding our production of electric current.

That we have not done so is attributable largely to the great cost of constructing hydroelectric plants, but also in part to the fact that bituminous coal has been both plentiful and cheap. Indeed, much of the tragedy of the water-power situation lies in the use of irreplaceable coal to the neglect of water power, which is continually being renewed. As Mr. Chase has put it: "What water power can do is to diminish the annual amount of coal needed, and thus lengthen the life, and help to preserve the by-products, of the coal beds. . . . We have been eating into our *principal*, while allowing a steady and unending *annuity*, in the form of water power, to waste away."⁶

Replaceable Natural Resources. The waste of natural resources which

⁶ *Ibid.*, p. 245.

we have been describing is especially serious because it constitutes an irreparable loss. Coal, petroleum, and natural gas once wasted are, for all practical purposes, gone forever, since geological ages instead of years are required for their formation. To be sure, there is always the possibility that satisfactory substitutes will be found, if and when these natural resources are completely exhausted. However, it is scarcely the part of wisdom to regard this possibility as justification for wasting these resources, when we know perfectly well how to prevent most of the waste.

Another but less dismal type of waste of natural resources has to do with natural vegetation, fish and game, and the natural fertility of the soil. In our use of these gifts of nature we have been most prodigal. There remains today but one-sixth of the "forest primeval" that was here when the Pilgrim Fathers landed in America. Through careless lumbering, preventable forest fires, and wasteful methods of manufacture, we lose some 5 billion cubic feet of lumber a year. The fish that once filled our streams, and the game that roamed our forests and plains, are now excessively scarce—in some instances because man has had to turn woodland and prairies into farms, but too often because of wanton slaughter or the pollution of rivers and other bodies of water. Our natural soil fertility, which made common a yield of forty bushels of wheat per acre in pioneering days, has given way to impoverished land which, planted year after year to the same crop, now produces but a quarter as much as it should. More pitiful still are those very considerable areas which have suffered erosion by wind or rain and are now wholly unproductive, though once they provided a livelihood for thousands of families.⁷

Without condoning the misuse of these important natural resources, there is no need to regard the situation as hopeless. For the remedy lies clearly within our own control, and may be applied as soon as we recognize our misdeeds and highly resolve to make amends. Not overnight, it is true, but in the course of a generation or so, great oaks from little acorns grow; and forests of oak, pine, and other important varieties of trees will soon be ours, once we undertake seriously to rebuild our denuded forest areas. The reforestation movement, carried on by the Civilian Conservation Corps under the administration of Franklin D. Roosevelt, made definite progress in this direction; but private as well as governmental agencies must join in the conservation movement if we are to provide for ourselves and our posterity an adequate, continually renewed supply of timber.

The remedy for the rapid decline of wild life is not so clear. We have done something in the way of conserving this resource by providing "closed seasons," during which fish and game are protected. We have replenished our streams with fish from hatcheries, and encouraged the multiplication of wild animal life by stocking our national parks and state game pre-

⁷ This and other problems of agriculture are treated in chap. 45 (vol. 2).

serves with needed types of animals and giving them adequate protection. We could, and unquestionably should, reduce the pollution of our waters, in the interest of human health as well as the preservation of our supply of fish. But we have, after all, passed the "direct appropriation" stage of economic development, in which man lives chiefly by taking the things provided by nature and using them directly rather than indirectly. In our present-day agricultural and industrial life, it is doubtless inevitable that we should minimize the importance of our wild-life resources and utilize our land in ways which will cause it to yield, acre for acre, more product than we should get if we set apart extensive areas of potential farm land for the development of wild animal life.

The problem of soil conservation is one which has been commanding much attention in recent years. Most people agree that something must be done, and done promptly, to reclaim our wasted agricultural areas and prevent further waste through unscientific farming and erosion. It has been demonstrated clearly that a farm that has been robbed of its fertility may be restored to a high state of productivity, if only the proper measures are adopted. And the necessary measures have been developed and made known by scientists who have devoted their energies to the problems of farming. Chemists, through the analysis of soils, can discover the deficiencies of given plots of land, and prescribe fertilizers that will add to the soil the plant food required for the production of desired crops. And the United States Department of Agriculture and many similar state departments stand ready to advise how to secure the best crops without at the same time impoverishing the soil.⁸

There seems no doubt that erosion by water and destruction by floods may be lessened by giving proper attention to reforestation, and that erosion by wind suggests the planting of grasses rather than cultivated crops in the areas that are affected.⁹ The problem, however, is one which cannot be solved satisfactorily by individuals, for it involves (as has been pointed out by Maury Maverick) a consideration of "great drainage areas, big rivers and little waters, dust storms, minerals, gas and oil; climates and different conditions; and the effect upon the earth of roads, bridges, cities,

⁸ Among the most important means of increasing the yields of crops are: (1) The selection of crops better adapted to the available soils; (2) the employment of suitable rotations; (3) the use of better-adapted varieties; (4) the reduction or elimination of losses from the depredations of insects and diseases; (5) control of weeds; (6) better or more thorough methods of preparing the land and cultivating the crop; (7) larger or more effective use of fertilizers; and (8) the substitution of crops which give a larger yield per acre for those which give a smaller yield."—From *Yearbook of the United States Department of Agriculture*, 1923, p. 464.

⁹ According to the United States Department of Agriculture, erosion in the United States had, as of 1938, "ruined for cultivation" 50 million acres, "severely damaged" 50 million more, removed from one-half to all of the top soil from 100 million acres, and left another 100 million in the condition described as "erosion process beginning." (*The Economic Almanac for 1945-46*, p. 26.)

sewer plants, and all artificial additions made by society." The Soil Conservation Service was created by Congress in 1936, in recognition of the direct responsibility of the federal government to protect the basic soil resources of the country. State planning boards, forestry and conservation associations, and other agencies are engaged, also, in the great task of reclamation and conservation of the soil. There is every reason to believe that a comprehensive program of soil conservation will be developed within a relatively short time.

The Waste of Labor

In Chapter 25 we shall examine in some detail the most tragic forms of labor waste, which appear in connection with the problem of unemployment.

Seasonal, Technological, Cyclical Waste of Labor. When in certain industries, because of seasonal unemployment, the most that workers can hope for is jobs during two-thirds of the year; when, because of technological unemployment, thousands are permanently laid off from occupations for which they have prepared by long training, and in which they had expected to find a lifetime of remunerative work; and when, as from 1930 to 1936, millions of able and willing members of our so-called labor army plead for work and get only a dole—there is no denying that our economic order is wasteful of labor.

The waste of labor is particularly costly. For labor that is not used when it is available is gone forever, like the unused water-power resources to which we referred earlier in the chapter. Moreover, the human beings whose labor is spurned must in any event be given maintenance, however inadequate it may be; and this subsistence charge constitutes a running expense for which society gets no return whatsoever in the form of economic goods. There is also, of course, an incalculable cost in the destruction of human values. For one of the sorriest consequences of unemployment is the broken morale suffered by men who, through long-continued enforced idleness, are finally driven to the conclusion that they are of no account in our economic life, since there is nothing they can do that the world wants done. Though these "human costs" are not measurable in dollars and cents, they are none the less a social burden, even in the strictly economic sense; for the continually unemployed become eventually *unemployable*, they consume at public expense at least a little though they produce nothing, and thus they are a perpetual drag upon society.

Undermanned and Overmanned Industries. A study by the Brookings Institution undertook to "measure the productive capacity of such labor as was at hand [in the United States in 1929] but was used to an amount less than it would have been able and willing to render if a larger demand had been forthcoming from the labor market. In a word [this study sought]

to measure the 'practically attainable' capacity of the national labor force which we had" at that time.¹⁰

This survey disclosed the fact that much labor is going to waste in this country, because some of our important industries are undermanned while others are overmanned. For example, to utilize fully the plant capacity in the field of mining, it is estimated that 70,000 more workers would have been required in the prosperous days of 1929. And to operate to capacity all of our manufacturing establishments, we should have had to add to American payrolls 1,000,000 more industrial workers than were then employed. Hence, these industries were undermanned, in the sense that they had either too few workers or too much plant. If society needed the products that these industries were *capable* of turning out, then obviously the plants were undermanned; if society could not have used these products advantageously (which is scarcely thinkable, as we shall point out later) the industries in question were guilty of wasting capital—a form of waste which we shall discuss in another section of the present chapter.

But waste of labor through overmanning is practiced quite as extensively as waste through undermanning. The Brookings investigators estimated that "actual agricultural production did not utilize the labor which remained nominally attached to that industry at anything like full practical capacity," and that 500,000 agricultural workers could be spared from our farms without causing a labor shortage.¹¹ Other estimates of overmanning, as of 1929, included 20,000 excess workers in forestry and fishing, 270,000 in the construction industry, 10,000 in transportation and communication, and 290,000 in public, domestic, personal, and professional service. These are people who, in the words of Gilbert and Sullivan, "never would be missed" if they were to leave the industries to which they have nominally been attached. They are people who are not needed in these industries, whose presence does not increase production, and whose retention is therefore in the nature of waste of labor. This labor should, of course, be released from these several industries, and applied in lines of economic activity where it can be utilized to advantage.

Waste of Labor "on the Job." The possibility of releasing these thousands of workers, so that they might make themselves genuinely useful elsewhere, is dependent upon the better utilization of the labor of those who remain to "carry on." In many instances, the so-called excess laborers can be spared only if those who are left on the job are employed more efficiently, through better training, better management, and better working conditions.

Much of the progress that has been made in recent years through

¹⁰ Edwin G. Nourse and associates, *America's Capacity to Produce*, Washington, Brookings Institution, 1934, chap. 19.

¹¹ *Ibid.*, p. 410.

the introduction of scientific management has resulted from providing working conditions that have enabled the workers to do their best. The adjustment of seats and work benches to meet the needs of individual workers, modifications in lighting to remove eyestrain, proper attention to temperature and humidity—these are examples of improvements in physical equipment that have been known to increase the efficiency of labor greatly. There is, for example, the case of a change in temperature from 73 to 68 degrees Fahrenheit which brought an increase of 63 per cent in the output of typists working in the office in which the change was made.

Economy in the use of labor demands that a worker's native talent shall be developed to its fullest, that the worker shall be given the highest type of work that he is capable of doing and that type only, that he shall not be allowed to sit around waiting for materials which should be on hand, that he shall be protected against preventable illness and accidents, and so on. When these and other fundamentals of economy in the use of labor are not practiced, society loses because it fails to get from its labor force as much production as it might have. There is the further fact that workers must be fairly well contented if they are to give their best efforts to production, as regards both quantity and quality. Realizing the dangers of having dissatisfied employees, some progressive business concerns have established personnel departments, or at least hired a personnel director, whose job it is to promote good feeling, lessen friction, and look after the well-being of the workers as well as the interests of the employer. But it must be said that the vast majority of business establishments in this country are still being conducted largely on an unscientific basis. As scientific management and personnel administration are able to show concrete results, and as their advantages become more generally recognized, they may be expected to make headway and achieve a wider adoption. In the meantime, inefficient management and real or imaginary grievances between employers and employees will continue to be a common source of waste of labor.

Waste in Youthful and Aged Labor. In 1930, more than 2,000,000 of the gainfully occupied in the United States were boys and girls ranging from 10 to 17 years of age; and more than 2,000,000 others were men and women 65 years of age or older.¹² It might appear, at first thought, that the use of the youthful and aged in industry meant a very complete utilization of our labor supply, and consequent social economies. But the seeming benefits of using very young and very old workers are illusory. The error arises, as Professor Hobson points out, "from a short-sighted view of

¹² *Statistical Abstract of the United States, 1937*, p. 53. It seems reasonable to suppose that the Fair Labor Standards Act of 1938, by prohibiting the employment of children under sixteen in the manufacture of goods entering into interstate commerce, will eventually bring about a substantial reduction in the amount of child labor in the United States in normal times.

the interests of the single person or his single family, instead of a far-sighted view of the welfare of the community. It is often a source of immediate gain to a working-class family to put the children out to wage-earning as early as possible, and to keep old people working as long as they can get work to do. It does not pay the nation, even in the economic sense, that either of these things should be done."¹³

Waste in the use of child labor consists partly of the physical and moral costs that result from subjecting young people to long-continued labor, mostly of a monotonous nature, in environmental conditions which are not always wholesome. It consists, also, in large part, of the lessened opportunities which will be theirs because they spend some years in earning which should be given over to self-development. And it must be remembered that society as a whole loses whenever its members fail to develop their abilities fully. Society loses the larger product which it might have had, and in some instances has to support in old age those whose life earnings would have made them self-supporting had their early training not been so limited. From both the individual and the social points of view, the early years of life are spent best when they are devoted to forms of development which will prepare the individual for greater productivity and enjoyment of life in his mature years.

Of labor in old age, we may say that, in general, it is neither humane nor economically wise to keep people of advanced years steadily at work. Work that is easy for those in middle life may be excessively hard on the aged, and, moreover, the old workers in a plant are often a drag upon production. It seems especially silly to allow our time-worn industrial veterans to remain on the job, while able and more vigorous workers walk the streets in search of employment. Yet this is precisely the situation which prevails regularly in American industry. For we have, even in our most prosperous years, an army of unemployed numbering at least a million and a half would-be workers, and at the same time keep on the job large numbers of those who have seen long service and might well be honorably retired. Of course, such retirement would involve the necessity of providing adequately for these venerable soldiers of industry, as we shall note in our treatment of economic insecurity. The point to be emphasized in connection with this brief survey of waste in labor is that we shall not be using our labor to the best advantage, so long as we keep the very young and very old members of society employed and allow the able-bodied, willing, middle-aged to go without jobs.

The Waste of Capital

The factory buildings, machinery, tools, and other equipment which the economist calls capital are of the utmost importance to society, in that they contribute *indirectly* to the satisfaction of human wants. But

¹³ J. A. Hobson, *Work and Wealth*, New York, The Macmillan Company, 1926, p. 80.

since they are not capable of yielding human satisfactions *directly*, they have social usefulness only so far as they are utilized in the production of consumers' goods. Capital which is not used at all, or is used inefficiently, or is used unnecessarily, is capital wasted in whole or in part. It is not difficult to show that we have in the United States much capital of these kinds.

The Problem of Unused Capital. When a plant fails to turn out as large a product as it is equipped to produce, it is wasting capital since the whole or a part of its equipment is idle. Such a condition is referred to by economists as "overcapacity," "excess capacity," or "unused capacity."

A number of estimates have been made of the unused capacity of various American industries. A committee of qualified engineers reported, in 1921: "Clothing factories are built 45 per cent larger than is necessary; printing establishments are from 50 per cent to 150 per cent overequipped; the shoe industry has a capacity of 1,750,000 pairs of shoes a day, and produces little more than half that number."¹⁴ Mr. Stuart Chase in 1926 quoted estimates to the effect that there was overcapacity amounting to 20 per cent in blast furnaces, 70 per cent in steel plants, 50 per cent in copper smelters, 75 per cent in lumber mills, and 50 per cent in sugar refineries.¹⁵ To bring the story more nearly up to date, we may cite the report of the Brookings Institution giving figures for 1929, and estimating an excess productive capacity in twenty-seven selected manufacturing industries, which ranged from a low of 2 per cent in the manufacture of dairy products to a high of 55 per cent in locomotive manufacture. The Brookings conclusion for manufacturing as a whole was that 17 per cent of the equipment was unutilized in 1929—the figure being 20 per cent for the five-year period from 1925 to 1929, inclusive.¹⁶

Some Causes of Excess Capacity. Excess capacity, with its inevitable waste of capital, results at times from the seasonal nature of an industry. The clothing industry, for example, must be prepared to produce as much output as the market will absorb when the demand for clothing is at its height; and this means an equipment in excess of that needed at other seasons of the year. Sometimes the cause is to be found in the mushroom growth of an industry, as in the manufacture of radio receiving sets in the 1920's. In this case, once the initial demand for radio sets had been met and the novelty of radio had worn off, it was found that the capital that had been put into the industry was far greater than was needed to provide sets for first purchases and for replacement of worn-out instruments. In like manner, the great popularity of silk goods in recent years led to the multiplication of looms and other equipment for making silk,

¹⁴ Federated American Engineering Societies, *Waste in Industry*, New York, McGraw-Hill Book Company, Inc., 1921, pp. 17, 18.

¹⁵ Stuart Chase, *The Tragedy of Waste*, pp. 186, 187.

¹⁶ Edwin G. Nourse and associates, *America's Capacity to Produce*, p. 307.

with the result that many of the individual silk mills are today excessively large and the number of mills is far too great for present requirements of the trade.

The production and sale of petroleum products afford an excellent illustration of overcapacity in several branches of a single industry. We have already spoken of the inexcusably large investment in drilling and pumping equipment. In some oil regions, largely because of the unduly rapid exploitation of the fields, the extension of pipe lines proceeded apace, and the transportation facilities later represented a very large percentage of overcapacity. The temporary shortage of gasoline in the eastern part of the United States in World War II did not result from a normal shortage of transportation facilities, but from a diversion to fighting areas of "tankers" which ordinarily carried motor fuel from the oil fields to the Atlantic seaboard. According to the Brookings Institution, only about 80 per cent of the equipment of our oil refineries was being used from 1925 to 1929. Of course, the unusual demands of World War II brought about a fuller utilization of this equipment. Finally, the unwarranted multiplication of automobile service stations is apparent to all who use our highways. It is estimated that the needs of automobilists and users of other motor vehicles could be met adequately with one-third the present number of filling stations, and that the unused capacity in this single item means an overinvestment of upwards of a billion dollars.

We must not overlook the fact that waste may result from capital being misused quite as well as from its not being used at all. The reports of investigators seem to show conclusively that much of our industrial equipment that sees daily service is utilized so inefficiently that a smaller quantity properly employed would be equally productive. Obviously, capital that is badly used is partly wasted. There is much waste, also, through the failure of business men to replace antiquated capital with that of the most improved types. On this point we shall have more to say in the next section.

THE RESPONSIBILITY FOR WASTE

It is an easier matter to describe waste in production than to allocate fairly the responsibility for such waste. However, it is safe to say that some of the waste in our economic life is chargeable to the enterprisers and workers who carry on our productive processes, some is chargeable to the whims of consumers, and some to the nature of our economic system itself.

The Wastefulness of Employers and Employees. The report of the Federated American Engineering Societies, to which we have referred, undertook to place the blame for waste in six important fields of production. The division of responsibility for waste in industry, as arrived at by these investigators, is shown in Table 7. "Over 50 per cent of the

responsibility for these wastes," reads the report, "can be placed at the door of management and less than 25 per cent at the door of labor, while the amount chargeable to outside contacts is least of all."¹⁷ This conclusion has done much to dispel the once prevalent notion that business men are generally efficient and workers inefficient, and that employers strive always to keep production up and costs down while employees usually do only as much work as they must to hold their jobs.

"Management, the unseen force which drives all that is physical within a factory, is by far the most important factor of the present industrial

TABLE 7. RESPONSIBILITY FOR WASTE IN PRODUCTION IN SELECTED INDUSTRIES^a

Industry Studied	Responsibility Assayed Against Management (per cent)	Responsibility Assayed Against Labor (per cent)	Responsibility Assayed Against Outside Contacts (the Public, Trade Relationships, and Other Factors) (per cent)
Men's clothing mfg.....	75	16	9
Building industry.....	65	21	14
Printing.....	63	28	9
Boot and shoe mfg.....	73	11	16
Metal trades.....	81	9	10
Textile mfg.....	50	10	40

^a Source: Federated American Engineering Societies.

age," writes an authority on scientific production.¹⁸ "Machinery and materials may be put to work, workers may labor; but without adequate management to organize and consolidate them into a profitable, coordinate whole, to distribute the results of their work effectively, and to govern their operations during performance, this performance may become so uneconomic as to cease entirely." Since management decides in present-day industry what is to be done, and when, and how, it is not surprising that management, rather than labor, is at fault when a plant fails to live up to its productive possibilities.

The investigators for the Federated American Engineering Societies listed the chief causes of industrial waste under four headings, as below:

1. Low production caused by faulty management of materials, plants, equipment, and men.
2. Interrupted production, caused by idle men, idle materials, idle plants, idle equipment.

¹⁷ *Waste in Industry*, p. 9.

¹⁸ Richard H. Lansburgh, *Industrial Management*, New York, John Wiley & Sons, Inc., 1928, p. 1.

3. Restricted production intentionally caused by owners, management, or labor.
4. Lost production caused by ill health, physical defects, and industrial accidents.¹⁹

They found, further, that the heavy toll of waste resulted largely from the failure of many establishments to meet the high standards of the best-managed plants in the several industries that were studied. In the metal trades, for example, four and one-half times as much waste was discovered in the *average* plant as in the *best*. The ratio in boot and shoe manufacture was three to one; in printing and men's clothing manufacture, two to one; and in textile manufacture and the building industry, one and one-half to one.²⁰

A later study conducted by two prominent mechanical engineers, Messrs. L. P. Alford and J. E. Hannum, estimates that if the performances of all plants were raised to the level of the best, the quantity of output would be increased 55 per cent in blast furnace operation, 73 per cent in the lumber and timber products industry, 81 per cent in machine tool manufacture, and 97 per cent in petroleum refining.²¹ Yet another estimate is that of forty-five engineers and twenty-six executives in some thirty branches of production, reported by the Columbia University Commission on Economic Reconstruction in 1934. This group estimated that production in their several industries could be raised, on the average, some 85 or 90 per cent, if the best current standards of production were adopted throughout these industries; and twenty-seven engineers of the group estimated that the output of *all industries* could be increased 75 per cent "with equipment and management brought to the level of best current practice."²²

The greater responsibility of management does not justify us in withholding criticism from workers whose attitudes and actions lead to waste in production. As is shown in Table 7, there are workers of this kind in industry; and in Chapter 24 we shall look into the limitation of output through labor's opposition to the introduction of new machinery and the practice of "soldiering on the job." There is ample reason, then, for the Federated American Engineering Societies' statement, "It must be recognized that if management is to meet this responsibility fully it must have the cooperation of labor."²³ Waste in the conduct of business can be reduced to a minimum only through the joint efforts of employers and employees.

Waste Caused by Consumers. The rôle played by consumers in the tragedy of waste in production is an important one. Though enterprisers

¹⁹ *Waste in Industry*, p. 8.

²⁰ *Ibid.*, p. 10.

²¹ Columbia University Commission, *Economic Reconstruction*, New York, Columbia University Press, 1934, p. 89.

²² *Ibid.*, p. 92.

²³ *Waste in Industry*, p. 9.

seem sometimes to produce goods and then force them upon the buying public by methods of "high-pressure salesmanship," the fact remains that to a very large extent the consumer directs production. It is he who in the main decides what goods shall be produced, and when and in what quantities they shall be made available. And his decisions are often the cause of waste in production.

In Chapter 30 we shall deal at considerable length with certain important problems in the field of consumption. We shall raise there the question of whether it is socially desirable that luxuries be produced while there is a dearth of certain necessities. But this is a question that relates to waste in consumption rather than in production. However, when millions of people insist upon purchasing much of their personal habiliment just in time for the "Easter parade," and when they buy twice as many automobiles in some months as in others, they are adding to the problem of waste in production. For they make highly seasonal some types of production which might be spread fairly evenly over the year, and thus they contribute to waste of capital and labor, as we have seen. And when in hot haste they abandon the drama and vaudeville for motion pictures, and the piano and phonograph for the radio, they render distressing and expensive a transition in consumer demand which might have been relatively painless and economical if only it had been effected more slowly.

In the present chapter we do not ask whether the "right" goods are being produced, but only whether what is produced is being produced efficiently. But it may not be amiss to suggest that if consumers made less of a fetish of fashion, and took more seriously Pope's couplet,

Be not the first by whom the new are tried
Nor yet the last to lay the old aside,

they could have the goods they now enjoy—and at lower prices, because their moderation (by lessening seasonal and technological disturbances) would aid in reducing the wastes of production, hence the costs of production, and finally the selling prices of the goods.

The Wastes of *Laissez Faire*. In an earlier paragraph we hinted that an economic system such as ours might itself be responsible for waste in production. *Self-interest* and *free enterprise* may provide the incentive and opportunity that stimulate production, as is often suggested, but they may also lead to the waste of land, labor, and capital, as we have shown by numerous illustrations. The institution of *private property* may in general be a great aid to production, but it may also impede production by permitting a factory owner to close his doors whenever he cannot operate his plant with personal profit. *Competition* may perform the beneficent function of regulating price, holding it fairly close to costs of production; but *cut-throat competition* may drive an enterpriser into bankruptcy, and

his employees and equipment into at least temporary idleness. *Large-scale production* may effect large economies, but it may conceivably grow into monopoly and result in the limitation of output. *Specialization* may increase the productivity of individuals and industries, but it may also lead to vested rights which (in the form of a tariff or subsidy) will burden a people for generations.

A *laissez-faire* economy is one in which there is abundant freedom of economic action. This means, in practice, that many enterprisers in many lines are going their individual ways, each estimating, as best he can, the probable total demand for his product, the probable output of other enterprisers in the same line, and a dozen other important items about which he necessarily has but meager information. The result is many mistakes, the production of too much of this and too little of that, recurrent business depressions, and a heavy toll of waste.

It is difficult to see how waste in production could be prevented without careful, centralized planning of output in many important lines of economic life. But such planning would put an end to free enterprise, as we have known it. Whether the gain would be greater than the loss is a question which will have attention in our discussion of recent radical movements in foreign countries. We have sought here merely to indicate that some waste in production appears to be an inevitable feature of the American economic system of today.

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1. What evidence is there that tends to show that American business enterprises are conducted efficiently?
 2. Define "waste in production."
 3. What, according to Professor Hobson, is "illth"?
 4. "The enterpriser who gets the maximum of output from the land, labor, and capital he employs, is not guilty of waste in production, even though the goods he makes are in the nature of 'illth.'" Explain.
 5. "There are instances in which productive methods, though socially wasteful, may be individually profitable." Explain.
 6. Why should it be difficult to secure exact and accurate figures on the amount of waste in a given industry? Illustrate.
 7. How do you account for the large amount of waste in coal mining and petroleum production?
 8. Contrast the amount of waste in the utilization of coal with that in the refining of petroleum.
 9. Why should a society regret particularly the failure to develop fully its available natural water-power resources?
 10. There is no need to regard as hopeless the situation which has resulted from the misuse of our forest and farming land. Explain.
 11. Explain the connection between unemployment and waste in production.

12. Some of the "costs" of waste of labor are not measurable in monetary terms. Explain.
13. Discuss the problem of waste as it arises from industries being "undermanned" or "overmanned."
14. Labor may be wasted, even when workers are kept steadily on the job. Illustrate.
15. "It does not pay the nation, even in the economic sense, . . . to put the children out to wage-earning as early as possible, and to keep old people working as long as they can get work to do," says Professor Hobson. Why not?
16. What is the meaning of "excess capacity"? Give at least two synonyms for this term.
17. Describe conditions which give rise to excess capacity.
18. Summarize the findings of the Federated American Engineering Societies as to responsibility for waste in production.
19. Consumers are sometimes blamed for causing waste in production. In what ways might they be responsible?
20. "Some waste in production appears to be an inevitable feature of the American economic system of today." Explain.

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PART THREE

The Determination of Individual Prices



Some General Principles of Price Determination

WE HAVE ALREADY NOTED THE FACT THAT SPECIALIZATION IS ONE OF THE important characteristics of modern economic life, and that it is very closely tied up with exchange. Through the process of specialization individuals produce much more of certain commodities and services than they personally expect to use; but, on the other hand, they have need of other commodities and services, the production of which they have left to other persons. To obtain the things he wants but does not himself produce, the individual must exchange, directly or indirectly, his surplus of commodities or services of a certain kind for portions of the surpluses of others.

The farmer, for example, though he comes closer to being self-sustaining than the average type of producer, exchanges wheat, potatoes, or other products which he has raised in large quantities, for building materials, farming implements, fertilizers, hardware, clothing, groceries, and other goods essential to his well-being. In like manner, specialization leads to surpluses of all kinds of goods in the hands of their producers, and these surpluses are distributed to other members of society through the process of exchange. Because goods are continually changing hands, every member of a highly organized economy goes through a process of weighing the relative merits of the goods he desires and those which he possesses, and through this process formulates a concept of the value of the various items under consideration; that is, he arrives at a decision on the importance of the commodities and services he wishes to obtain as expressed in terms of the commodities or services he is able to offer.

Exchange and Value. The term "value" refers to a ratio of exchange. This fact is made clear by the use of a term—"exchange value"—which is frequently employed in economic discussion. *Value, then, is nothing more or less than the power of a good to command other goods in exchange.* If ten bushels of potatoes exchange for one hat, the value of the hat is obviously ten times the value of a bushel of potatoes. And if a hat exchanges for five bushels of wheat, it is clear that the value of wheat per bushel is twice as great as the value of potatoes.

It should be noted, however, that value applies to a given grade or quality of a given commodity, and not to that commodity in general. For example, there may be a half-dozen grades of potatoes, with a separate value for each grade. It is entirely possible for two grades of potatoes to differ more widely in value than, let us say, potatoes of a certain grade and wheat of a certain grade differ in value. It would be no less inexact to speak of "the value of potatoes" than to speak of a "man's wage." There are many grades of potatoes, and therefore many values for potatoes, just as there are different grades of workmen, with consequent differences in wages.

Every exchange is, of course, a two-sided arrangement. Each party to the exchange desires economic goods possessed by the other, and is willing to make a trade. There now comes what is termed in legal phraseology "a meeting of minds." The parties concerned weigh the relative advantages of retaining and giving up the goods they possess, and in this process is developed a ratio of exchange which determines how much of one good shall be surrendered for a certain amount of the other.

In a free exchange both parties gain. That is to say, each gives up the thing he esteems less highly for the thing he esteems more highly; and this general principle holds good whether the exchange is simply a trade of possessions on the part of two boys, a sale and purchase made in a local store, or the long-distance type of exchange known as international trade.

Value and Price. In a later chapter¹ we shall note a number of reasons for expressing values in terms of money; and values are ordinarily so expressed. The result is called price, and *price may be defined as value expressed in terms of money*. Business men and economists alike generally fall back upon prices when making statements about values, for the reason that to express the values of commodities in terms of other commodities is always a cumbersome process and is sometimes very confusing. If ten bushels of potatoes exchange for one hat, the value of the hat is certainly ten times the value of a bushel of potatoes. But it is equally accurate, and decidedly more convenient, to express this relationship in terms of price, saying, for example, that the price of hats is 10 dollars apiece and the price of potatoes one dollar a bushel. The exchange ratio (or value) of one to ten is the same, whether it is expressed in terms of goods or of dollars.

Prices are accurate measures of values *at any given time*. But they are poor measures of values *at different times*. If, for example, the price of a commodity at one time were compared with the price of the same commodity at another time, it would be impossible to tell whether there had been a change in the *value* of the commodity without knowing whether there had been a change in general prices, commonly spoken of as the price level. This is the case because money itself sometimes changes

¹ Chap. 31 (vol. 2).

in value, as we shall see in our study of price levels.² When prices in general rise, the value of money falls, and vice versa. Over considerable periods of time one cannot be certain, without actually investigating the situation, that there has not been an important change in the price level—that is, in the value of money. And if there has been such a change, a comparison of the present price and the former price of a good gives no indication of the extent to which the *value* of the good has changed, unless the change in the price level is duly taken into consideration.

For example, the price of cotton in 1920 was almost three times as high as in 1913. But much of this advance in price is accounted for by a decline in the value of money, and not by an increase in the power of cotton to command other goods in exchange. Expressed in terms of commodities other than money, the value of cotton was by no means three times as great in 1920 as in 1913.

Nevertheless, in our present treatment, it will be convenient to express values in terms of money, and we shall so express them. If we are dealing with long-time periods, it must be understood that *we are assuming that there has been no change in the value of money during the period referred to*—that is, that there has been no change in the price level. It may be mentioned in this connection that in the many exhaustive studies of prices made by various agencies in recent years, care has usually been taken to “correct” the prices used, so that readers may not be misled by changes that are due to fluctuations in the price level. When corrections of this kind have been made, it is permissible to use prices to express values even over long periods of time.

The Use of Graphs in the Study of Price. The student of economics who wishes to master the principles of price determination will do well to undertake, from the very outset, to express his problems in the form of graphs. Not only does this method of approach render less difficult the study of one of the most troublesome phases of economic theory, but it has the added advantage of helping one to retain in mind the essential features of the principles that relate to the determination of individual prices. On this account, we here describe briefly the making of demand and supply curves, and in later chapters shall show how these curves are used to illustrate price determination.

Demand and Supply Schedules. An exhaustive study of cotton prices published by the United States Department of Agriculture³ provides us with data from which we may draw up a demand schedule and construct a demand curve. *A demand schedule* (which we shall call “demand”) is *a series of quantities of an economic good which, in a given market at a given time, would be purchased at a corresponding series of prices.*

² Chap. 36 (vol. 2).

³ Bradford B. Smith, “Factors Affecting the Price of Cotton,” *Technical Bulletin No. 50*, Washington, United States Department of Agriculture, January, 1928.

Modified slightly, the government figures referred to give us the following demand schedule:⁴

At a Price (per lb.) of	Buyers Stand Ready to Buy (millions of bales)
40 cents	10
35 "	11
30 "	12
25 "	13
20 "	15
15 "	18
10 "	23

Though the Department of Agriculture does not provide a supply schedule, we may construct a hypothetical schedule for ourselves, assuming that cotton would be offered by dealers in the following quantities at the prices given:

At a Price (per lb.) of	Sellers Stand Ready to Sell (millions of bales)
10 cents	5
15 "	11
20 "	15
25 "	18
30 "	20
35 "	21
40 "	22

Thus we see that a *supply schedule* (which we shall call "supply") is a series of quantities of an economic good which, in a given market at a given time, would be offered for sale at a corresponding series of prices.

Demand and Supply Curves. These schedules may readily be converted into demand and supply curves, the demand curve appearing as in Fig. 7.

It will be noted that prices are plotted along the vertical line OY, and quantities (bales, in the present instance) along the horizontal line OX. The demand schedule supplies the data for the placing of a number of points, *each point indicating both a price and a quantity*. The position of

⁴ Strictly speaking, a demand schedule is made up of quantities and prices at a given time. The figures here used were compiled from the experience of a number of years. Thus it is not a *true* demand schedule, in the exact economic sense of that term. But it is entirely satisfactory for our present purposes, and its use should not lead to confusion. All that we have done is to ignore the time element in using these data. The difficulties of "extracting" the factor of time in the construction of demand schedules may be seen by reference to Henry Schultz, *Statistical Laws of Demand and Supply*, Chicago, University of Chicago Press, 1928.

each point is determined by the intersection of two imaginary lines drawn perpendicularly to OY and OX from particular price points and quantity points, respectively. The broken lines in Fig. 7 indicate the perpendiculars that fix the position of the point for 15,000,000 bales at 20 cents a pound. When a point has been supplied in like manner for every item listed in the demand schedule, these points are connected by solid lines, and the demand curve is complete (see DD). Though only seven

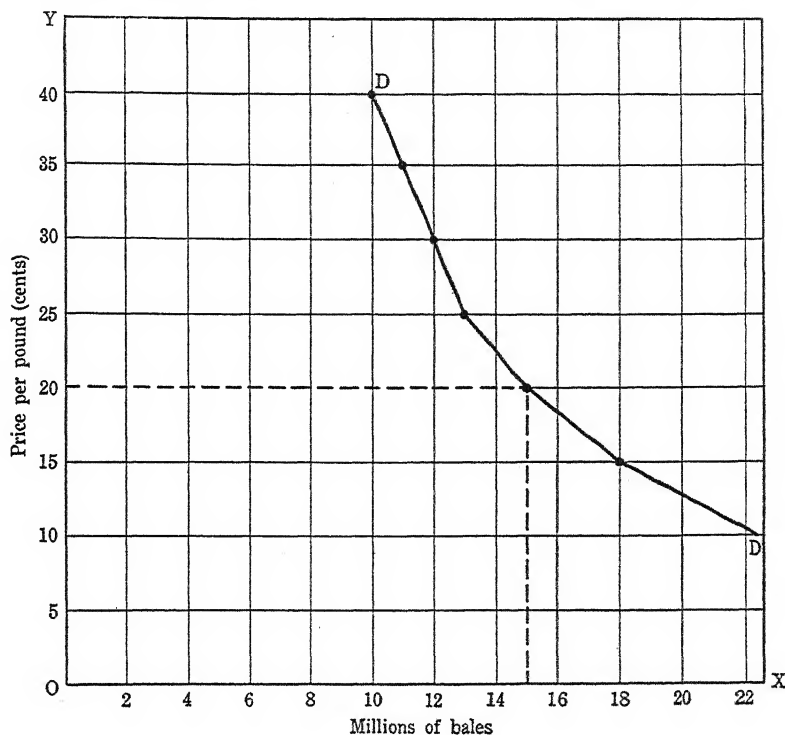


FIG. 7. A DEMAND CURVE
(Charted from a demand schedule.)

prices appear in our illustration, it will be understood that a demand curve may have an infinite number of quantities and corresponding prices.

The supply schedule may likewise be made into a curve as in Fig. 8.⁵

⁵ The SS curve in Fig. 8 does not have any necessary relation to costs of production, but merely shows the prices at which various quantities would be offered by sellers. However, the supply curves for long-run supply (which will be described in later chapters) are definitely related to costs of production, being based on the average costs per unit of the several quantities that appear in the supply schedule. We may also note here a fact that will later have detailed treatment, viz., that long-run supply curves do not necessarily show (as does the supply curve in Fig. 8) that progressively larger quantities would be offered only at progressively higher prices. Indeed, long-run supply curves may slope upward, downward, or move parallel to the OX axis.

Meaning of the Term "Market." It should now be noted that the word "market" is employed in a special sense by economists. To most persons this term suggests a definite place (perhaps a building) in which buyers and sellers come together for the transaction of business. The economist, however, uses the word to include any region, however large or small, in which buyers and sellers are so situated that they may engage freely in the purchase and sale of a given good. The market for fresh vegetables,

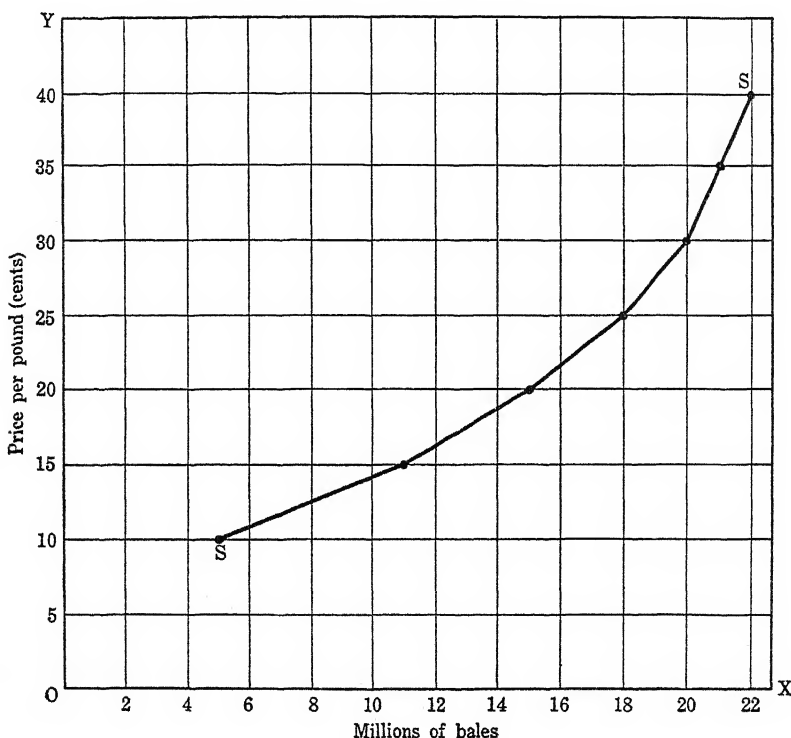


FIG. 8. A SUPPLY CURVE
(Charted from a supply schedule.)

for example, is often a very restricted one, because of the perishability of these goods, and may be limited to a small village. But such commodities as wheat and cotton, which are in demand in many countries and can be transported safely and cheaply for great distances, are bought and sold in a *world* market.

The essential elements of a market, then, are the possession of accurate information on market conditions by the parties concerned, and the ability to deliver the goods promptly and safely once a sale has been made.

Market Demand and Market Supply. We shall have occasion to use two further terms which require a few words of explanation. They are "market demand" and "market supply." We have spoken of a demand schedule (or demand) as being a series of quantities of an economic good which, in a given market at a given time, would be purchased at a corresponding series of prices. *Market demand* is represented by a single point of a demand schedule; that is, it is the quantity of an economic good which, in a given market at a given time, would be *purchased* at a specified price. In like manner, *market supply* bears a similar relation to the supply schedule; it is the quantity of an economic good which, in a given market at a given time, would be *offered for sale* at a specified price.

THE INFLUENCE OF DEMAND IN PRICE DETERMINATION

The Meaning of "Demand." The word "demand" is one of many which economists use in a special sense. Some persons employ this term when what they mean is simply desire. They say, for example, that the demand for houses is great, when what they have in mind is that there is a desire, on the part of many people, for better housing facilities. To the economist, however, there is no such thing as demand apart from price. Demand to him signifies much more than the desire for economic goods. The economic use of the term includes not only this desire, but also the willingness and ability to purchase the commodity at a stipulated price. It is obvious that the desire of a laborer for a palatial residence, a Rolls-Royce car, and a retinue of servants, which he may have seen portrayed in motion pictures, does not in any wise affect the demand schedules for these commodities and services, and does not, therefore, constitute demand in the economic sense; for there can be no demand until desire is backed up by purchasing power. All that has been said in this paragraph is entirely consistent, of course, with our technical definition of demand as a series of quantities of a good which, in a given market at a given time, would be purchased at a corresponding series of prices.

The Law of Demand. Economists who have studied the actions of the buying public, as expressed in purchases of economic goods, have generalized their findings in the form of a statement known as the Law of Demand. According to this law, *the quantity of an economic good that will be purchased, in a given market and at a given time, varies inversely with the price*; that is to say, more goods of a given kind will be bought at a low than at a high price. Therefore, the larger the quantity of a good to be disposed of, the lower the price must be. This state of affairs is shown graphically by the general slope of the demand curve, which is toward the right and downward, as may be seen by reference to the de-

mand curve shown in Fig. 7. If the Law of Demand is correct, a total demand curve must always move in this general direction, since a movement downward indicates lower price and a movement to the right indicates increased quantity.

Causes of the Law of Demand. There are three important factors contributing to the relationship between quantity and price that is described by the Law of Demand. These factors are:

1. The principle of diminishing utility.
2. Differences in the desires of individuals.
3. Differences in the money incomes of individuals.

Influence of the Principle of Diminishing Utility. We have seen that there can be no such thing as demand for a good unless there is a desire for the good, for no man will pay a price for a thing that he does not desire. The amount he would pay rather than go without the good measures the intensity of his desire for it, or (to use a term employed in Chapter 5) the utility of the good. If, then, a person is willing to pay 6 cents for an orange, the 6 cents is a measure of the utility of the orange to this person. We may take it for granted that he expects the gratification yielded up by the orange to justify the expenditure of the 6 cents. It may develop that his calculations were wrong. He may find, upon consuming the orange, that it affords less gratification than a 5-cent apple. He may even discover that it gives him indigestion instead of satisfaction. But whatever may be his reasons for wanting the orange in the first place and whatever the outcome of its consumption, the fact remains that, when he made the purchase, 6 cents measured the utility of the orange to him and influenced his bid for it.

But a willingness to pay 6 cents for a single orange does not necessarily mean a willingness to pay as much for a second or a third. Indeed, it is a matter of common experience that the more units of a given good a man possesses, the less highly does he prize each unit of his total stock. A single suit of clothes is extremely important in a civilized society, and its utility is correspondingly great. It is not so important to have a second suit, and it is still less necessary to have a third. The utility of the second suit, therefore, is not so great as the utility of the first, and that of the third is still less than that of the second. If suits of clothing should be added to one's wardrobe until one's personal effects included (say) seventy-five suits, as is said to be the case with the Duke of Windsor, the utility of each of these suits would obviously be rather slight. That is, any one suit could be dispensed with without the owner suffering greatly through its loss, though by the man having but two suits, or even three, the loss would be felt more keenly. The point is that the more units of a good one has, the less importance does one attach to each of the units. Another way of putting it is to say that *at any given time the intensity of*

a person's desire for a unit of a given good diminishes progressively as additional units of this good are acquired.

This is the principle of diminishing utility, and we may readily see how it contributes to the Law of Demand. We have suggested that a man who is willing to pay 6 cents for a first orange might have a slighter intensity of desire for a second, third, hundredth, or thousandth orange. Since he will pay no more for an orange than the amount which measures its utility to him, then clearly as the utility of oranges diminishes his bids for oranges will decline. He would take two oranges, let us say, only if oranges were selling at 5 cents apiece, three if they were 4 cents, four if 3 cents, and five if they could be had at 2 cents each.

If, then, this person were the only one bidding for oranges, the demand schedule for oranges would be one orange at 6 cents, two oranges at 5 cents apiece, three at 4 cents, four at 3 cents, and five at 2 cents. This schedule, it will be seen, illustrates perfectly the Law of Demand, since it shows that the quantity that would be purchased varies inversely with the price. A curve drawn from this schedule will, like the demand curve in Fig. 7, slope to the right and downward. It will be apparent, therefore, that the principle of diminishing utility is a factor affecting the Law of Demand.

The Influence of Differences in Desires. Another factor is differences in desires. Some people are very fond of oranges and will pay high prices rather than do without them, whereas others care for oranges only moderately, and still others have so slight a desire for this fruit that they can be persuaded to purchase only if the price is extremely low. It is entirely possible, for example, that of five persons having equal money incomes, one, because of his liking for oranges, would be willing to pay 6 cents for a *first* orange, while the second, third, fourth and fifth members of the group, because of their smaller desires for oranges, would pay, respectively, only 5, 4, 3 and 2 cents for their *first* oranges.

If we were to graph the influence of these differences in desires, relating as they do merely to the *highest* prices at which these five individuals would buy oranges, we should again have a curve sloping toward the right and downward. For our data show that one orange would be bought at 6 cents, two at 5 cents apiece, three at 4 cents, and so on, the number that would be purchased varying inversely with the price. Of course, each of these persons, whether he would buy a first orange at 6 cents or at 2 cents, will be subject also to the principle of diminishing utility, and sooner or later would buy additional units of this good only if they could be had at progressively lower prices.

It is evident, then, that the principle of diminishing utility and differences in desires both contribute to the Law of Demand, since both influence the demand curve in the same general direction.

The Influence of Differences in Money Incomes. To these two influ-

ences must be added a third—that of differences in the money incomes of individuals. There can be little doubt that some members of society who are very fond of oranges must, because of limited incomes, do without them when the price is as high as 6 cents each. Some who could not afford to buy at 6 cents would doubtless come into the market at 5 cents, still others at 4 cents, and so on. Moreover, some persons with small incomes who bought a single orange each at 6 cents might be induced to buy two if the price were 5 cents, or three if oranges could be had at 4 cents apiece. The point is that there are people whose incomes, though small, would permit them to buy oranges at a low but not a high price. It seems safe to say, therefore, that this one factor—the influence of differences in incomes—would, if presented in graphic form, give us a curve sloping to the right and downward indicating that the number of oranges that would be purchased varies inversely with the price.

Because of the operation of the principle of diminishing utility, an individual can be induced to buy more units of a given good at a low price than at a high price. Because of differences in desires, more people can be induced to buy a given good at a low than at a high price. Because of differences in the money incomes of individuals, more people can be induced to buy a given good at a low than at a high price. Combining these three factors, we have a composite of influences all of which affect demand in the same direction. This composite gives us the statement known as the Law of Demand, which is pictured graphically in the demand curve. The Law of Demand applies, of course, to economic goods of all kinds.

Changes in Demand. Demand, as we have seen, is a series of quantities of an economic good which, in a given market at a given time, would be purchased at a corresponding series of prices. When changes in demand occur they indicate that there has been a readjustment of quantities and prices. An *increase in demand* means that at each of the several prices appearing in a demand schedule a larger quantity would be purchased now than formerly, or that the same quantity as would formerly have been bought at each of these several prices would now be bought at a higher price. A *decrease in demand*, on the other hand, means that at each of the prices appearing in a demand schedule a smaller quantity would be purchased now than formerly, or that the same quantity as would formerly have been bought at each of these prices would now be bought only at a lower price. It is impossible to express increased and decreased demand without resorting to rather involved sentences, but any difficulties that the reader may have in understanding the above statements will disappear promptly if he will follow carefully the descriptive matter in the remainder of the present section.

Table 8 consists of three demand schedules which show original, increased, and decreased demands for oranges. Let us make sure, by

reference to these schedules that the requirements of increased and decreased demand are here fully complied with. We note, for example, that under the original conditions of demand 10,000 oranges would have been bought at 5 cents each. According to our definition of *increase in demand*, "[at 5 cents] a larger quantity would be purchased now than formerly"; and the final column of Table 8 shows that 13,000 oranges, instead of 10,000, would now be bought at this price. Or, to quote the second half of our definition, "the same quantity as would formerly have been bought at [5 cents] would now be bought at a higher price"; and the table shows that this same quantity, 10,000 oranges, would now be bought at the price of 8 cents each.

TABLE 8. CHANGES IN DEMAND SCHEDULES FOR ORANGES,
SHOWING DECREASED AND INCREASED DEMAND

Price per Orange	Number of Oranges That Would Be Bought		
	Decreased Demand	Original Demand	Increased Demand
8 cents.....	4,000	7,000	10,000
7 cents.....	5,000	8,000	11,000
6 cents.....	6,000	9,000	12,000
5 cents.....	7,000	10,000	13,000
4 cents.....	8,000	11,000	14,000
3 cents.....	9,000	12,000	15,000
2 cents.....	10,000	13,000	16,000
1 cent.....	11,000	14,000	17,000

Comparing, next, original demand with decreased demand, we find that the figures show that at 5 cents each only 7000 oranges would now be taken, as against the former figure of 10,000, and that the original quantity of 10,000 would be bought only if the price were as low as 2 cents each. Here, then, is a fulfillment of the two requirements of a *decrease in demand*—that "at each of the prices appearing in a demand schedule a smaller quantity would be purchased now than formerly" (7000 instead of 10,000 oranges at 5 cents each), and that "the same quantity as would formerly have been bought at each of these prices would now be bought only at a lower price" (10,000 oranges at 2 cents instead of 5 cents each). A detailed examination of Table 8 shows that increased demand and decreased demand, respectively, are here correctly illustrated.

Fig. 9 presents the situation graphically. DD is the original demand curve. D'D' is a new curve showing increased demand, and D"D" another new curve indicating decreased demand. In the graphic presentation of demand curves, then, an increase in demand is shown by a shift of the

curve to the right, and a decrease in demand by a shift of the curve to the left. In Fig. 9 it happens that the new curves, $D'D'$ and $D''D''$, are parallel to DD , but it should be apparent that a new curve, showing increased or decreased demand, need not be parallel to the original demand curve.

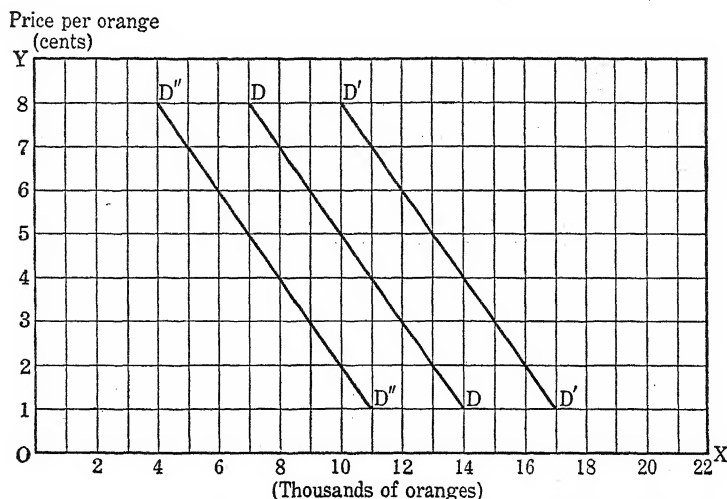


FIG. 9. DEMAND (D), INCREASED DEMAND (D'), AND DECREASED DEMAND (D'') FOR ORANGES. (Compare Table 8.)

An increase in the demand for a good may occur because the utility of the good has increased, or because an increase in money incomes induces former buyers to purchase in larger quantities or new buyers to enter the market. A decrease in demand, of course, would result from causes of an opposite nature. In the case of decreased demand, either the good in question is desired less highly than before, or there has been a decline in money incomes which, though the utility of the good may remain unchanged, makes it impossible for would-be consumers to purchase as large quantities as were indicated in the old demand schedule. (It is scarcely necessary to add that an increase or a decrease in demand may be the result of more than one cause.)

To be specific, an increase in the demand for oranges might well result from an elaborate campaign setting forth the health-giving qualities of this fruit. Publicity of this kind would doubtless make some people willing to buy more oranges at a given price than they would formerly have bought at that price. Or an increase in the wages of workingmen might bring the use of oranges within the range of many families in which they were formerly unknown because of their relatively high cost. On the other hand, if an enterprising manufacturer of cigarettes should urge upon the public the desirability of smoking cigarettes instead of eating oranges, conceivably the effect might be a decline in the demand for oranges and

an increase in the demand for cigarettes. A decline in the wages of workers might also bring about a decrease in the demand for oranges, since, with reduced money incomes, certain wage earners would feel compelled to reduce their expenditures for those items of food which they might regard as luxuries.

The Elasticity of Demand. We must now consider the nature of the terms "elastic demand" and "inelastic demand." *Elastic demand* is a demand schedule which shows that the quantity of a good that would be purchased is so highly sensitive to price that a larger total amount would be expended for the good at a low than at a high price. *Inelastic demand* is a demand schedule which shows that the quantity of a good that would be purchased is so slightly sensitive to price that a smaller total amount would be expended for the good at a low than at a high price. If the total expenditure for the good would be the same regardless of price, we have a demand schedule with an "elasticity of unity."

TABLE 9. AN ELASTIC DEMAND SCHEDULE, SHOWING THE NATURE OF THE DEMAND FOR AUTOMOBILES

Price per Car	Quantity That Would be Bought	Total Expenditures
\$1800	100,000 cars	\$180,000,000
1600	300,000 cars	480,000,000
1400	500,000 cars	700,000,000
1200	700,000 cars	840,000,000
1000	900,000 cars	900,000,000
800	1,200,000 cars	960,000,000
600	1,650,000 cars	990,000,000

The demand for luxuries is often elastic, because an appreciably smaller quantity of a luxury may be sold at a high than at a low price, with the consequence that the *total expenditure* for the good in question would be smaller at the high price than at the low price. The demand for automobiles may be used by way of illustration. To many people an automobile for personal use is regarded as desirable but not indispensable. These people will buy cars if the price strikes them as moderate, but they will not buy if the price seems unduly high. Hence, as we have suggested in Table 9, so many automobiles of a particular kind might sell at \$600 each that the total expenditure for such cars at this low price would exceed greatly the total expenditure if the price were \$1800 per car.

On the other hand, there are some economic goods, commonly referred to as necessities, which sell in almost as large quantities at high prices as at low. Bread is a commodity of this type. The amount of bread consumed by the average family is about the same whether the price is high or low. This is true also of potatoes and many other relatively cheap food products. Indeed, the less expensive the commodity, ordinarily the

more inelastic will be the demand for it, and vice versa. For if the good is one for which there are fairly satisfactory lower-priced substitutes, a high price may drive many people to the use of these substitutes. If the price of butter is high, some who would like to use butter will substitute oleomargarine; but if the price of potatoes or bread is high, there are few lower-priced substitutes to which buyers can turn, though they may, to be sure, practice extreme economy in the use of these goods and thus buy somewhat smaller quantities than they would have bought if the prices were lower.

Some articles have an inelastic demand for the reason that they play so small a part in the average person's budget that even a high price does not keep people from buying. Decidedly fewer automobiles would sell at \$1800 apiece than at \$600, since this difference in price forms an appreciable percentage of the total income of the average individual. But it is probable that both newspapers and postage stamps sell almost as extensively at three or four cents each as at two cents, simply because, at the higher prices, the outlay for newspapers and postage stamps is an almost negligible item in one's total expenditure for economic goods.

Tables 9 and 10 show clearly how demand schedules may be tested to ascertain whether they represent elastic or inelastic demand. In Table 9 we have a hypothetical demand schedule for automobiles, to which have been added total expenditures for all automobiles that would be sold at the several prices listed in the schedule. These steadily increasing "total expenditures" show that society as a whole would, under the conditions that we have assumed, spend more for automobiles at the lower than at the higher prices. The social budget for automobiles is sufficiently elastic to induce greater total spending for this commodity when the price is low than when it is high. Table 9 therefore illustrates elastic demand.

Table 10 shows a contrary condition. For, although a low price for bread (according to the demand schedule) would induce a greater consumption of this good, yet the *total amount spent* for bread would be smaller at a low price than at a high price. This is the sort of situation that is referred to when we use the expression "inelastic demand."

Every demand schedule must obey the Law of Demand, and the fact that a schedule is elastic or inelastic does not in any way affect this requirement. Tables 9 and 10 both show that "at progressively lower prices progressively larger quantities would be purchased by consumers," so that both of these schedules clearly conform to the Law of Demand.

Demand is elastic, then, if the total amount spent by society for a given good would be larger at a low than at a high unit price; it is inelastic if the total amount spent for the good would be smaller at a low than at a high unit price. In the case of elastic demand, the larger quantity of a good that would be disposed of at a lower price as compared with a higher price, would more than compensate for the loss of revenue suffered

through the acceptance of the lower unit price; in inelastic demand, the larger quantity sold would less than compensate for this loss per unit; and in the case of an elasticity of unity the loss in revenue per unit of commodity would be fully compensated, but no more than compensated, by the larger quantity that would be sold at a lower as compared with a higher price.

TABLE 10. AN INELASTIC DEMAND SCHEDULE, SHOWING THE NATURE OF THE DEMAND FOR BREAD

Price per Loaf	Quantity That Would Be Bought	Total Expenditures
16 cents.....	5,000,000 loaves	\$800,000
14 cents.....	5,250,000 loaves	735,000
12 cents.....	5,500,000 loaves	660,000
10 cents.....	6,000,000 loaves	600,000
8 cents.....	6,250,000 loaves	500,000
6 cents.....	6,500,000 loaves	390,000
4 cents.....	6,750,000 loaves	270,000
2 cents.....	7,000,000 loaves	140,000

It should be noted that a demand schedule may indicate elasticity at one point and inelasticity at another. If, for example, Table 9 showed that, at \$800, 1,100,000 cars would be sold (expenditure, \$880,000,000), and at \$600 the sales would be 1,300,000 (expenditure, \$780,000,000) we should have inelastic demand in this portion of the schedule, but elastic demand in the portion containing the other prices and quantities. Elastic and inelastic demand curves follow the general downward slope to the right which is characteristic of all demand curves. However, there is frequently quite a difference in the appearance of curves showing elastic and inelastic demand. Elastic demand is shown in Fig. 10, and we note that the downward trend of the curve is quite gradual when compared with that of inelastic demand, which is indicated in Fig. 11. But the appearance

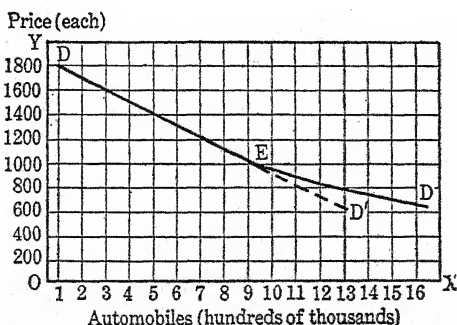


FIG. 10. ELASTIC DEMAND
Shown in the demand for automobiles.

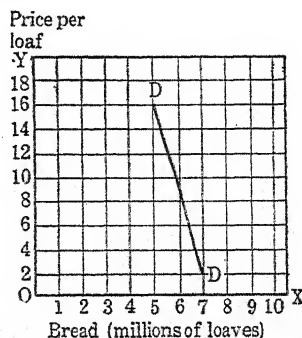


FIG. 11. INELASTIC DEMAND
Shown in the demand for bread.

of the curve is not the deciding factor, since the appearance of the curve depends upon the scale on which it is drawn. The real test consists of comparing total expenditures in the manner that we have described. In Fig. 10 the curve DD is elastic throughout, whereas the curve DD' is elastic from D to E, but inelastic from E to D'. Hence the curve DD' pictures the change from elastic to inelastic demand, which sometimes occurs and which was explained in the preceding paragraph. We shall have occasion to refer to elastic and inelastic demand in our further discussion of price determination.

Value is the power of a good to command other goods in exchange.

Price is value expressed in terms of money.

Demand (that is, *schedule demand*) is a series of quantities of an economic good which, in a given market at a given time, would be purchased at a corresponding series of prices.

Supply (that is, *schedule supply*) is a series of quantities of an economic good which, in a given market at a given time, would be offered for sale at a corresponding series of prices.

A *market* is any region in which buyers and sellers are so situated that they can engage freely in the purchase and sale of a given economic good.

Market demand is the quantity of an economic good which, in a given market at a given time, would be purchased at a specified price.

Market supply is the quantity of an economic good which, in a given market at a given time, would be offered for sale at a specified price.

Law of Demand: The quantity of an economic good that will be purchased varies inversely with the price, in a given market at a given time.

Elastic demand is a demand schedule which shows that the quantity of a good that would be purchased is so highly sensitive to price that a larger total amount would be expended for the good at a low price than at a high price.

Inelastic demand is a demand schedule which shows that the quantity of a good that would be purchased is so slightly sensitive to price that a smaller total amount would be expended for the good at a low price than at a high price.

1. Why is "price" important in a society in which "specialization" is highly developed?
2. Define "value."
3. Give a specific illustration (not taken from the text) of "value."
4. Define "price."
5. Why is "value" usually expressed in terms of money?
6. Are prices accurate measures of values? Explain.

7. What is the purpose of "correcting" prices, as is often done in price studies?
8. Define "demand."
9. Define "supply."
10. Give synonyms for both "demand" and "supply."
11. Exactly what is a "demand curve"? A "supply curve"?
12. Define "market." Give examples of several types of markets.
13. Distinguish between "demand," "schedule demand," and "market demand."
14. Distinguish between "supply," "schedule supply," and "market supply."
15. State the Law of Demand.
16. What is the general direction of a demand curve? Why?
17. To the economist the word "demand" signifies much more than the mere desire for economic goods. Explain.
18. What are the three factors contributing to the situation described by the Law of Demand?
19. Explain the principle of diminishing utility.
20. We speak of "differences in desires" for economic goods as a factor influencing demand. Give some concrete examples indicating that such differences really exist.
21. Explain the manner in which "differences in money incomes" affect demand.
22. Precisely what is meant by an "increase in demand"? By a "decrease in demand"?
23. How are increased demand and decreased demand, respectively, indicated on a demand graph?
24. Explain economic conditions under which an increase in demand might take place. A decrease in demand.
25. What are (a) "elastic demand," (b) "inelastic demand," and (c) "elasticity of unity"?
26. Give examples of two commodities for which you should expect the demand to be elastic. Two for which the demand is inelastic.

REFERENCES FOR FURTHER READING

- The following references are applicable to Chapters 12 to 16, inclusive:
- CARVER, T. N., *The Distribution of Wealth*, New York, The Macmillan Company, 1904.
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- MEADE, J. E., and HITCH, C. J., *An Introduction to Economic Analysis and Policy*, New York, Oxford University Press, 1938.
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Price Determination Under Competition

SOMEONE HAS BEEN SO UNKIND AS TO SAY THAT A PARROT COULD BE MADE into a passably good economist simply by teaching him to answer "supply and demand" to every question that might be put to him. This statement, we believe, will scarcely be taken literally by the reader who has given careful consideration to the material that we have covered thus far. Nevertheless, it serves to emphasize the vital part played by supply and demand in the determination of individual prices. And the significance of supply and demand needs to be emphasized, for *the prices of all economic goods are determined by the conditions of supply and demand*. This statement, however, comes pretty close to being meaningless unless one has an

TABLE 11. SUPPLY SCHEDULE AND DEMAND SCHEDULE FOR COTTON

Price per Pound	Supply (quantities that would be offered)	Demand (quantities that would be purchased)
10 cents.....	5 million bales	23 million bales
15 cents.....	11 million bales	18 million bales
20 cents.....	15 million bales	15 million bales
25 cents.....	18 million bales	13 million bales
30 cents.....	20 million bales	12 million bales
35 cents.....	21 million bales	11 million bales
40 cents.....	22 million bales	10 million bales

understanding of the nature of supply and demand, and of the factors affecting these two determinants of price. We have already had a good deal to say about demand, and shall devote the greater part of several chapters to a study of supply which will provide us with abundant food for thought.

Equilibrium of Demand and Supply. But our examination of supply will be simplified if, before entering upon it, we illustrate clearly the statement that price determination hinges upon the relationship between supply and demand. In the previous chapter we looked into the making of supply and demand schedules and supply and demand curves. The

two schedules for cotton there constructed may be put into a single table, as in Table 11. They may also be illustrated graphically in a single chart, as in Fig. 12. Here, it will be observed, we have brought together the demand and supply curves which were shown separately in Figs. 7 and 8.

Table 11 shows that there is only one price at which buyers would take exactly the same quantity of this good as sellers would offer. This price is 20 cents a pound, and the quantity is 15 million bales. We have here an *equilibrium of demand and supply*, and it is through an equilib-

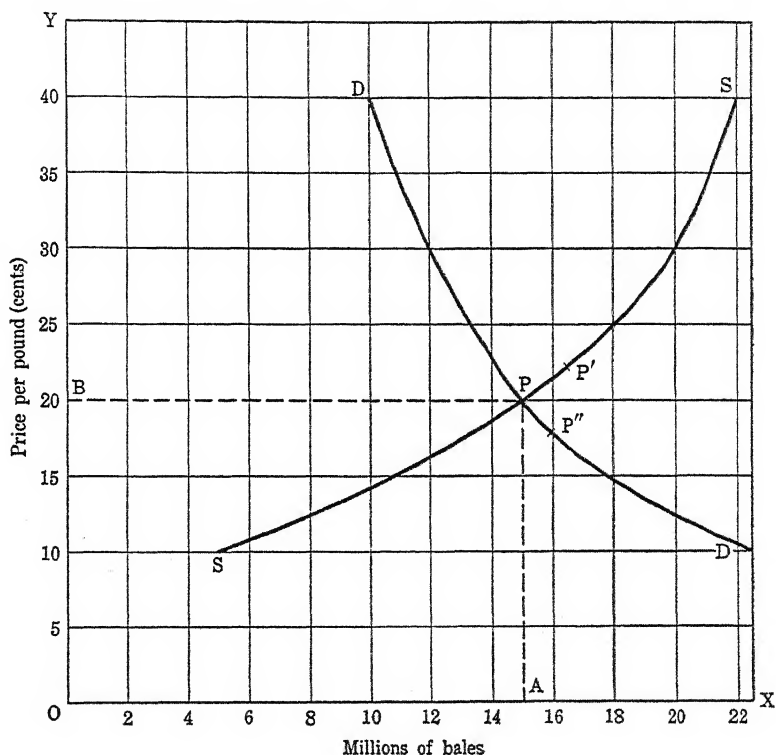


FIG. 12. EQUILIBRIUM OF DEMAND AND SUPPLY IN THE SHORT RUN,
UNDER COMPETITIVE CONDITIONS

rium of this kind that price is indicated. Fig. 12, since it is a graphic representation of Table 11, shows precisely the same thing. Equilibrium of demand and supply is here effected at the point at which the demand and supply curves intersect, and this point, P, indicates that 15 million bales would be offered for sale and 15 million bales would be taken at the price of 20 cents a pound.

It should be clear, then, that in attempting to ascertain the price of a good under any given set of conditions, we must keep a sharp lookout

for the point at which market demand is precisely equal to market supply. In the pages that follow, we shall look into price determination under perfect and imperfect competition, and complete and partial monopoly, and we shall examine prices in the "short run," "long run," and "period of current production." But in all the complications which beset the student of price theory, he may perhaps get some comfort, and some assistance as well, from the realization that every price is determined by the forces of supply and demand, and that in most instances price can be indicated by an intersection of supply and demand curves.

COMPETITIVE PRICE IN THE SHORT RUN

Meaning of the "Short Run." We have referred above to the short run, long run, and period of current production. The long run and period of current production will be described later. The short run, with which we are to deal immediately, may be defined as *a period of time in which there exists a fixed stock of a given economic good*. The stock of a good is the total quantity in existence and available for sale at a given time; a *fixed stock* is a stock which cannot be increased, and cannot be decreased except by sale.

This assumption of a short-run condition—of a fixed stock of an economic good—is certainly not an assumption contrary to fact. At any given moment the stock of every commodity is fixed, and, in the case of many commodities, the stock cannot be increased quickly. This is particularly true of agricultural products; the world stock of cotton, for example, cannot be enlarged until the coming of the next harvest, and consequently the condition is one of fixed stock until the new crop arrives. But it is equally true that the stocks of some types of manufactured goods cannot be added to very quickly because they are made by exceedingly round-about processes, the finished commodities maturing slowly from the raw materials. In general, however, man's efforts to speed up production are less often interfered with in manufacture than in agriculture, since manufacture is more largely independent of natural conditions, such as rainfall and temperature.

Short-Run Price and Costs of Production. The costs incurred in the production of goods are of great importance in the determination of price in the long run and the period of current production, and will be dealt with in due time. They play no direct part, however, in price determination in the short run, so that it will not be necessary to take them into account in our examination of short-run price. Costs of production can influence price only by affecting the quantity of a good that will be produced *in the future*. Thus, the prospect of getting a price in excess of costs of production will lead enterprisers to produce large quantities of the good, while the fear of having to take a price lower than costs of produc-

tion will naturally lead them to limit their output, or perhaps even to quit producing entirely, to avoid incurring losses.

Once the good has been produced, however, it is beyond the influence of the costs of production. The question that then arises, as we shall see, is the price at which the existing stock of the good can best be disposed of, and the answer need have no relation to the cost at which the good was produced. It is wholly a matter of marketing the good to the best advantage—of *getting as much as possible for the stock*, regardless of whether this amount is greater or less than, or exactly equal to, the costs of production.

Equilibrium of Demand and Supply in the Short Run. Let us now examine a specific instance of short-run price determination, using the data given in Table 11 and Fig. 12 and assuming that they relate to the short-run supply of and demand for cotton in a given market. Here we have a fixed stock of 22 million bales. The demand curve illustrates the well-established fact that larger quantities would be purchased at a low price than at a high price; the supply curve shows, on the other hand, that larger quantities would be offered at a high than at a low price. Combining these two curves, we get an equilibrium at the point P, the distance of which from the horizontal line, OX, indicates short-run price, which is often spoken of as "market price." It may be remembered from Chapter 12 that this point, P, also marks the intersection of two perpendiculars drawn from the vertical line OY and the horizontal line OX, respectively. This being true, the line AP, measuring price, must equal its parallel OB, and the price per pound at which 15 million bales will sell is 20 cents.

P is the only point on the chart at which the demand and supply curves meet; that is to say, 20 cents a pound is the only price at which buyers are willing to buy exactly the same amount that sellers are willing to sell. It is the one and only price in the demand and supply schedules (and consequently in the demand and supply curves) at which 15 million bales of cotton will be both offered and purchased. It is the outcome, on the part of the buyers and sellers, of a comparison of satisfactions and sacrifices, which is a condition of exchange essential to an actual trade transaction.

The Process of Bargaining. What takes place, in effect, is a process of *bargaining*. Sellers would like to secure as much as 22 cents a pound (see P') or even more, and they may at first ask this high price; but they soon discover, from the sluggishness of the market, that unless they lower the price they will be left with very considerable quantities of cotton on their hands. They then proceed to weigh the relative advantages of disposing of their holdings at once at a lower figure or, on the other hand, of retaining their holdings for a time in the hope of obtaining a better price.

In reaching a decision, the sellers ask themselves some such questions

as these: What are the chances that the price of cotton will go up instead of down? How promptly is the higher price likely to be obtainable? How much will the storage charges for this period amount to? Is there a probability that the cotton will deteriorate in the meantime, and if so, to what extent? And so on. If, having surveyed the present situation and taken into account future prospects, the sellers of cotton come to the conclusion that it would be unwise to postpone the sale of their holdings, they will gradually reduce their quotations, and their asking prices will move toward the point P.

Buyers, on the other hand, may try to buy at as low a price as 18 cents (see P''), but, discovering that purchases cannot be made at this figure, they gradually increase their bids, so that demand prices likewise move toward P. The final outcome, if our chart represents conditions accurately, is a meeting on the common ground, P, which, as we have already noted, is called the *equilibrium of demand and supply*. The point P, as we have said, indicates short-run price, or market price. These two terms may be used interchangeably.

Competition and Monopoly. Short-run price is arrived at through a process of bargaining, and bargaining is seen at its best when there is competition among sellers to dispose of their goods, and among buyers to get possession of these goods. *Competition is a market condition in which there are so many buyers and sellers that the actions of any one buyer or any one seller will not have any effect upon price.* Competition assumes the absence of combinations among sellers and among buyers. It assumes, moreover, that every buyer and every seller is well informed as to the activities of other buyers and sellers, and that all units of the good under consideration are exactly alike, so that there is no reason why a buyer would rather purchase from any one seller than from another.

Most of our discussion of price determination will assume the existence of free competition, as we have just described it. But competition, it must be confessed, is not always free and unhampered. It sometimes, though not often, happens that potential buyers, deciding that prices are too high, agree among themselves not to make purchases until prices are lowered. The effect is to bring the prices down, a result which is brought about when sellers find it imperative to secure funds with which to meet their financial obligations. There were several instances of concerted action of this kind during World War I and following both that war and World War II.

Much more common than agreements among buyers are those among sellers of goods, which have the effect of raising prices through a shrewd regulation of the quantity of a given commodity that is offered for sale. This practice, carried to its extreme, gets into the field of complete monopoly; and monopoly price (as we shall see later), though determined by conditions of demand and supply, is peculiar in that the quantity offered

for sale is controlled either naturally or artificially, being in the hands of a single seller or very few sellers. Under monopoly conditions there is bargaining between sellers and buyers, but the buyers bargain at a disadvantage because of the absence of competition among sellers.

It will be well at this point to emphasize the fact that the only way that price can be influenced is through some action affecting either the quantity of a good that purchasers are willing to buy or the quantity that sellers are willing to offer. If consumers wish to beat down the price of a good through unified action, they must do it by limiting their purchases, that is, by bringing about a decrease in demand such as is illustrated in Fig. 13 of the present chapter. Sellers, moreover, can secure higher prices only by decreasing the quantity offered for sale, as is shown in Fig. 14. This statement applies equally to competitive and monopoly conditions. We see, then, that supply and demand are all-important factors in the determination of individual prices.

A Note on Our Method of Approach. It is quite possible that some readers, by the time they have completed our treatment of price determination, will feel that undue emphasis has been placed upon *perfect* competition and *complete* monopoly, particularly in view of the fact that we admit frankly that these two extreme conditions are seldom found in the actual market place. But we have adopted our method of procedure deliberately. We believe, with Professor Schumpeter, that "the theory of perfect competition [and complete monopoly] still remains a useful and almost indispensable background with which to compare, and therefore by which to understand, any other situation, however far removed it may be from it."¹ We are convinced that the forces underlying price determination can best be understood by studying in detail their operation under assumed conditions, and then examining (as we do in Chapter 16) conditions which differ from our original assumptions, and noting the effects of these deviations upon our earlier conclusions.

The Law of One Price. If buyers and sellers in a given market are well informed (as is implied in the economic concept of a market), and free competition exists (as is also assumed except when monopoly price is being considered), we have the conditions which lead to the operation of the Law of One Price. This law states that there can be but one price for a given good in a given market at a given time. Reverting to the chart illustrating the conditions of demand for and supply of cotton, we may ask why, since *some* buyers could (and would, if necessary) pay more than 20 cents for cotton, virtually the *total quantity* disposed of must sell at as low a price as 20 cents; and why, on the other hand, since *some* sellers, if necessary, would sell at less than 20 cents, all of the cotton sold brings so high a price.

The answers lie in the fact that no buyer will knowingly pay more than

¹ Joseph A. Schumpeter, in *Journal of Political Economy*, April, 1934, p. 249.

necessary and no seller will take less, and as a consequence 15 million bales can be disposed of only if the price is 20 cents. If this quantity were thrown upon the market at different times, different prices might be paid, but competition among sellers prevents this method of marketing. If, for example, only 12 million bales were first offered for sale, they would be taken at 30 cents a pound, as is shown by the chart; but the dealers having the remaining three million bales, anxious to share in this high price and willing to accept any figure not lower than 20 cents, would quickly throw their holdings upon the market, and the price would inevitably drop to 20 cents. As a consequence of this method of marketing, there can be (with very few exceptions) but one price—a price which is dictated by the relative conditions of supply and demand. Competition among buyers tends to force the price up, and competition among sellers tends to drive it down.

Deviations from Short-Run Price. Though 20 cents a pound is the price at which the great bulk of this quantity of cotton must sell, this does not mean that there may not be occasional cases of sales at prices either higher or lower than 20 cents. For the equilibrium of demand and supply is arrived at through the trial and error method known as bargaining. In the process of bargaining it is entirely probable that some few buyers, in order to be certain of getting enough cotton to meet their needs and not knowing just how low the price will go, will make their purchases before the actual equilibrium takes place, and as a result will pay a somewhat higher price than would have been necessary a little later, say as much as 21 or 22 cents. It is likewise possible that some sellers, willing to take a lower price than 20 cents if necessary, will dispose of their individual supplies of cotton at a little less than they might be able to get if they were to hold out somewhat longer.

For the demand curve shows clearly (as has already been pointed out) that some buyers stand ready to buy at a higher price than 20 cents if it should seem necessary to pay more than that amount; and the supply curve shows that some sellers will sell at less than 20 cents if doubt arises as to their ability to secure so high a price. However, these unwise and unnecessary sales and purchases will be relatively few; and it seems probable that, as a usual thing, the sales which take place at prices above the point of equilibrium are counterbalanced by those that take place at prices below that point. These deviations from the short-run price dictated by the true conditions of demand and supply are due, of course, to imperfect competition, which is attributable in turn to ignorance of actual market conditions. Short-run price, then, is an *ideal* price which would prevail under conditions of perfect competition. In the absence of ideal conditions, *actual prices* fluctuate about short-run price, some sales taking place at exactly that figure, but others at somewhat lower prices and still others at somewhat higher prices.

The Law of Supply and Demand. It should be evident, from what has been said thus far, that price is the result of certain interactions of supply and demand. These important forces, supply and demand, will be examined further in the next few chapters. We may well conclude our observations on short-run competitive price determination with a generalization known as the Law of Supply and Demand. This law states that value (or price) varies directly with demand, and inversely with supply. (The reference is to *schedule* supply and demand.) Expressed in non-technical language, this means that if supply remains constant an increase in demand will result in a higher price, whereas a decreased demand will bring a lower price; and if demand remains unchanged an increase in supply will result in a lower price, but a decreased supply will drive the price up.

In actual experience, of course, neither demand nor supply is likely to remain absolutely unchanged; but it is not difficult to find instances of one of these forces increasing or decreasing much more rapidly than the other, with the effects that are predicted in the Law of Supply and Demand. At the outbreak of World War I, for example, there was a sharp decrease in the demand for cotton, owing to a decline in the manufacture of cotton cloth in England and elsewhere, with the result that cotton prices slumped; at the same time, there was a tremendous increase in the demand for steel which was required for munitions, shipbuilding, and so

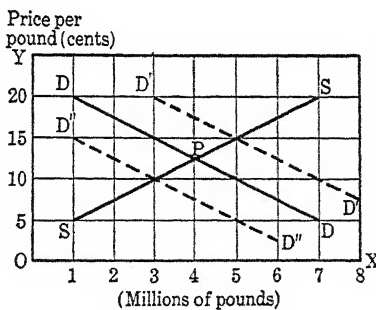


FIG. 13. PRICE CHANGES CAUSED BY CHANGES IN DEMAND

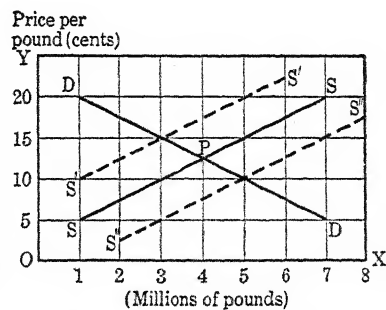


FIG. 14. PRICE CHANGES CAUSED BY CHANGES IN SUPPLY

on, and prices for steel rose to unprecedented figures. Here we have concrete examples of the truth of the statement that price varies directly with demand. That price varies inversely with supply is illustrated by the behavior of dye prices during that war. With a limitation of the quantity available because dyes could not be imported from Germany, the price in the United States soared to dizzy heights. But an increase in supply depresses price. An unusually large crop of apples, or other agricultural products, again causes price to vary inversely with supply; and in a case

of this kind, since supply is increased, the price of the commodity is driven down.

The tendency of price to vary directly with demand and inversely with supply is shown graphically in the two simple diagrams given here. The charts show hypothetical conditions of supply and demand for sugar in a given market. In Fig. 13 the short-run price, or market price, as indicated by the intersection of the supply and demand curves, is $12\frac{1}{2}$ cents a pound. If, now, supply remains unchanged while demand shifts, we find that price moves *directly* with demand. If demand increases, as is shown by the curve $D'D'$, price increases to 15 cents a pound. If demand decreases, as is indicated in the demand curve $D''D''$, price also decreases, and sugar sells at 10 cents a pound.

Fig. 14 illustrates the second part of the Law of Supply and Demand. In this diagram, demand remains constant while changes in supply take place. If supply decreases, as is shown in the $S'S'$ curve, the price rises from $12\frac{1}{2}$ cents to 15 cents; and if supply increases (see $S''S''$), the price declines from $12\frac{1}{2}$ cents to 10 cents a pound. Thus we see that price varies *inversely* with supply.

It will be clear that simultaneous changes in supply and demand may result in the effect of one change being canceled by the effect of the other. If we assume an increase in demand, such as is indicated by $D'D'$ in Fig. 13, to be accompanied by an increase in supply of the size pictured in Fig. 14, we find that the tendency of price to rise because demand has increased is counteracted by the tendency of price to drop by reason of increased supply, with the equilibrium of supply and demand, and therefore the market price, remaining unchanged at the former price of $12\frac{1}{2}$ cents a pound.

AN INQUIRY INTO "COSTS OF PRODUCTION"

Thus far in our study of individual prices we have had no occasion to look into the costs of production of economic goods. We have simply taken for granted the existence of a quantity of a given commodity and tried to ascertain how, with a definite amount of a good available in a given market, the selling price of this good would be determined. The condition assumed was one of fixed stock—a stock incapable of being increased within the specified time limit, but one from which there would be placed upon the market such a quantity of the good as appeared to the individual sellers most likely to bring in the largest total receipts for their shares of the entire stock. These receipts would include, of course, not only the amount received from sales made during the *short run*, but also whatever was realized from the later sale of any part of the stock that might have been left over at the close of the short-run period.

We now give some attention to the question of future production, and

its effects upon price determination. This inquiry leads us into the field of costs of production, which consist of all payments that must be made for the use of productive agents needed in the operation of a given type of enterprise.

General Items Entering into "Costs." The expenses which comprise costs of production are rent paid to landowners, wages to laborers, interest to capitalists who lend funds for the purchase of plant and equipment, and an adequate remuneration to managers for directing the work of turning out and disposing of the product of the industry. But some enterprisers, in figuring their costs, show a tendency to overlook some of these items, and as a consequence have only a vague notion of their *total* costs of production. When a business man has to pay out to others rent for the use of land, interest for the use of funds invested in capital, and wages for labor and management, he is pretty certain to include these items in his costs of production. But if, as often happens, he is using some land or capital of his own, or is himself actively managing the enterprise, there is a possibility that some of these items will be neglected in figuring the costs of doing business.

Such costs as are represented by rent and interest must be included in total costs of production, even though the business man owns outright all the land and capital he is using in his enterprise. For, in this event, he as a business man is paying himself as a landowner a sum that should appear as rent; and he is paying himself as a capitalist an amount that should enter into costs of production as interest. It matters not, then, whether land and capital are owned by the enterpriser himself or borrowed from others. A true understanding of total costs can be obtained only if, in calculating his costs of production, the business man sets down against the goods produced not only actual cash outlays, but also whatever amounts he could secure from others for land and capital owned by himself and used in his business. Moreover, the managerial ability that he expends in his own business must be charged for, since this ability, like the land and capital that he owns and uses in his enterprise, would doubtless command a price from other enterprisers, if it should be thrown upon the market.

If a man can command a payment from others when they use his land, capital, and services, he is surely justified, when using these things in his own business, in including in his costs of production an amount as great as he could obtain for these same items elsewhere. Indeed, he cannot know his costs accurately unless he does make a charge for the use of his own productive factors as well as for those that are owned by others. If he is working wholly with rented land and borrowed funds, and makes sure to enter against the business a charge for his own personal services, there is little likelihood of falling into error. For the enterpriser is fairly certain to set down among his costs of production all

actual cash outlays; it is only those payments that he makes, or should make, to himself that are likely to be overlooked.

Specific Items of "Costs." But a business man, in reckoning his costs, usually includes in his expenditures considerably more than four items. Not only rent, interest, wages of labor, and wages of management, but such items as raw materials, power, light, transportation, advertising, insurance, legal services, taxes, and depreciation and upkeep of plant, are likely to find a place in his calculations. This fact, however, does not invalidate our statement that costs of production are made up of payments for the four factors of production. For each of these specific items—such, for example, as transportation—can be broken down into its elements; and when this is done it will be discovered that each of the items is itself the product of land, labor, capital, and management. In the final analysis, then, these are the factors of production that must be paid for if production is to be carried on; and the sum total of the payments for these factors constitutes the costs of production.

Opportunity or Alternative Costs. We shall see later that the price of a good is often closely related to the costs involved in producing the good. These costs, in turn, are composed of the payments that must be made for the use of the several factors—land, labor, capital, and business management—that are essential to the production of the good. But we are not yet out of the woods, for we have still to discover what it is that determines the amounts that owners of productive factors will be able to obtain from those who must have the use of these factors of production if they are to carry on business. This problem will be discussed at some length in the chapters dealing with the distribution of income. For the present, we shall find it helpful, in our consideration of the costs of production, to look into the theory of "opportunity costs," or, as they are sometimes called, "alternative costs."

Opportunity Costs in the Case of Labor. According to this theory, any enterpriser who wishes to secure the use of a productive agent—such, for example, as labor of a given type—will be compelled, in a free market, to pay as high a price as is bid by any other enterpriser who needs this agent of production in order to carry on his business. Ordinarily, the person who has labor to sell will dispose of it to that enterpriser who makes him, all things considered, the best offer for his services. By way of simple illustration, we may say that in a given market—and this term, it will be recalled, implies accurate knowledge and free competition on the part of all concerned—a manufacturer of radio receiving sets will find it necessary to pay a cabinetmaker as large a wage as other manufacturers of this product are offering for labor of this kind.

Moreover, the cabinetmaker's skill is sought not only by manufacturers of radio sets, but by producers of phonographs, pianos, high-grade furniture, and other goods. The cabinetmaker, then, is not compelled to

sell his labor to a *particular* manufacturer of receiving sets, or, indeed, to *any* manufacturer of receiving sets. There is presented to him the alternative of working in a piano factory or in some other establishment where labor of his type is needed. He has available, then, a number of opportunities, from among which he may choose that which looks best to him. Experience teaches that, other things being equal, our cabinet-maker will lend his efforts to that line of production that pays him the highest wage. Therefore, *every* business that requires cabinetmakers will be compelled to pay workers of this type as much as is offered by *any* business; and wages for this particular kind of labor will tend to equality throughout the market.

It will be found, upon investigation, that practically all workers have labor to sell which could be used to advantage in any of several different businesses. Pick-and-shovel men are needed in ditch-digging, road-making, and in many other activities. Semi-skilled machine tenders are employed in some dozens of industries. Skilled workers, such as stone masons, bricklayers, plasterers, and electricians, are required in many—not merely a few—types of building construction. Our illustration might be extended to include nearly all kinds of labor. We see, then, that the demand for a particular type of labor comes, as a rule, not from one concern or from one industry, but from many concerns and oftentimes from several industries. From among these various “opportunities,” the worker may choose that which strikes him as being the most advantageous.

General Application of the Principle. But there are alternative uses for all four of the factors of production, and not for labor alone. The seller of land, capital, or business ability, quite as much as the seller of labor, ordinarily has available more than one opportunity for the profitable employment of his productive agent. On a given piece of agricultural land either corn or cotton can be produced; and an urban building site may be advantageously located for either a bank building or a theater. Thus, the landowner is able, to some extent, to choose the use to which his property shall be put, and his choice is likely to be dictated by self-interest. In the case of capital, again, we have a factor which, over a period of time, can be diverted from one industry to another. For if capital is less well paid in one type of industry than in another, that which is employed in the less profitable business will not be replaced as it wears out, but the “replacement fund”—built up for the purchase of new equipment as the old is impaired—will be used for investment in the more remunerative field. It is scarcely necessary to suggest that business ability of a particular type can usually find employment in any of a number of different industries; for the organizing and directing skill that is essential to the success of one business is almost certain to be in demand in other businesses as well.

Opportunity Costs as an Equalizing Force. We noted, in the case of

the cabinetmaker, that the industry that actually secures his services must pay him at least as high a wage as that offered by any other industry. This statement holds also for land, capital, and business ability. The industry that obtains the use of the factors of production does so at a cost sufficiently high to outbid, in the case of each factor, other industries that are anxious to use it but cannot afford to pay the price. The cost of each factor of production, then, is determined by the opportunities for profitable employment that are open to the factor; and the theory of opportunity costs states that this cost cannot be less than is bid by any form of business which offers alternative employment to the factor.

Since the cost to the business man of any single factor of production is determined by the price which the factor could command in an alternative use, it follows that the total costs of production of a commodity consist of the sum of the opportunity costs of all factors that are employed in its production. In certain parts of the southern states, for example, a given amount of land, labor, capital, and management will produce, over a period of years, an average annual yield of so many pounds of cotton. The costs of production of this cotton are made up of the opportunity costs that must be paid for the use of the productive factors. These same factors could be employed in the alternative business of corn-raising, and probably in the growing of still other farm products. Cotton, then, is in active competition with corn in bidding for these scarce and useful productive agents.

If cotton is to be produced, it will be necessary for the cotton-growing industry to pay for each acre of land as high a rent, to each farm laborer as high a wage, for each unit of capital as high an interest rate, and to each active enterpriser as high a wage of management, as would be paid for these several factors if they were utilized in corn-raising or any other economic activity. And, in like manner, if any corn is to be grown, the factors must be paid in this field of production as much as they would command in cotton-growing.

An Illustration of Equalization. We referred a little while back to the tendency toward equality of remuneration for all like agents of production, and we find this tendency actually working out in large degree, as is evidenced by the presence, side by side, of cotton fields and corn fields, the cotton crop being produced by factors strikingly like those employed in corn production, and these like factors being paid like prices. A condition of this kind means that, the prices of corn and cotton being what they are, it is immaterial to the farmers which of the two crops is produced, since economically one pays just as well as the other. If an acre of land, plus a given quantity of labor, capital, and management, will produce 150 pounds of cotton or 30 bushels of corn, neither crop has an advantage over the other, provided the price of cotton is 20 cents a pound and corn is selling at a dollar a bushel. Both crops, then, will be produced; and the

costs of production of cotton will be \$30 an acre or 20 cents a pound, while the costs of corn will be \$30 an acre or a dollar a bushel.

Equalization and the Distribution of Productive Agents. But there is no assurance that the two crops will attract *equal quantities* of each of the productive factors. What we know for a certainty is that the price paid for a given factor must be the same for both of the competing crops. The

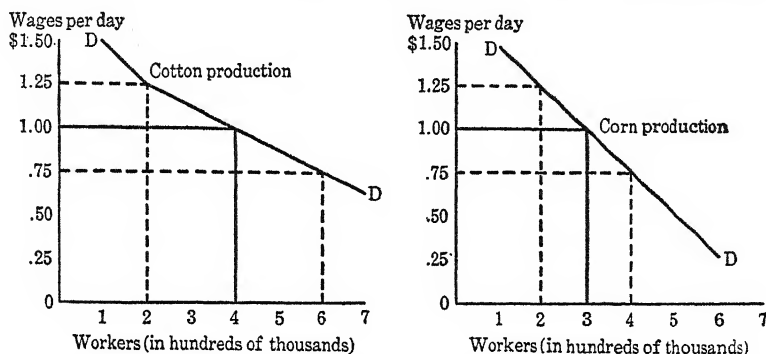


FIG. 15. OPPORTUNITY COSTS

As illustrated by the demand schedules for laborers of a type needed in the production of both cotton and corn. Note the difference in the quantity of this factor which, at a given price, will be used in the production of each of the two crops.

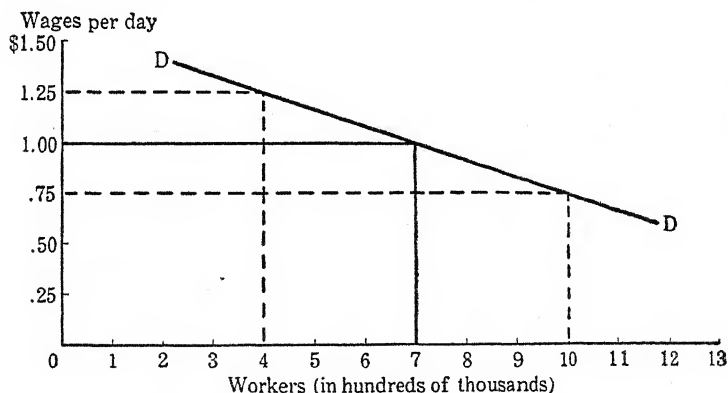


FIG. 16. TOTAL DEMAND FOR LABORERS USED IN PRODUCTION OF COTTON AND CORN

(This demand curve is a composite of the separate curves given in Fig. 15.)

quantity of the factor that will be employed depends in each instance upon the demand schedules of each industry for the factor in question. We may take, as a single instance, the case of farm labor of a type used in both cotton and corn production. Let us suppose, for the sake of simplicity, that this kind of labor is used only for producing cotton and corn.

Fig. 15 shows graphically the demand schedules for labor in cotton- and corn-growing, respectively. In Fig. 16 these two schedules have been combined into a total demand curve for this particular type of labor.

Fig. 16, then, shows the wages that will be paid for various quantities of labor of this kind, and Fig. 15 shows the proportions in which the labor supply will be divided between the two fields of production. Fig. 16 indicates that if 700,000 workers are available in this market, the wage rate will be \$1 a day, and it will be the same in both cotton- and corn-growing; but we see, by reference to Fig. 15, that of these 700,000 workers, 400,000 will be employed for cotton production and only 300,000 for corn. If, under the conditions of demand here pictured, 1,000,000 laborers instead of 700,000 are seeking employment, they will receive only 75 cents a day for their services; in this instance 600,000 will be used in cotton-growing, and 400,000 in the raising of corn. If, on the other hand, there are only 400,000 laborers of this particular type, the daily wage will be \$1.25, and the total number of workers will be distributed equally between cotton and corn.

It is evident, therefore, that a change in the quantity of one of the factors of production, such as labor, will not disturb the *uniformity of rate* paid by the various industries using the factor. To be sure, an increase in quantity will lower the rate, and a decrease will raise it; but there is no reason to suppose that any business will be able to secure the factor at a lower rate per unit than any other business. In Fig. 15 we see that a reduction in the number of workers from 700,000 to 400,000 would cause both cotton and corn producers to pay a higher rate for labor. But there would be no difference in the wage as between the business of cotton-growing and the business of corn-growing. In both instances the wage of \$1.25 a day would prevail.

It is equally apparent, however, that there will be a readjustment in the proportions of the total labor force that each of the two businesses will employ, if the price that must be paid labor is \$1.25 a day. For the demand curves in Fig. 15 show that an increase in wage from \$1.00 to \$1.25 will reduce by one-half the amount of labor used in cotton production, but only by one-third the amount used in raising corn. The demand for cotton, it may be suggested, is more highly elastic than the demand for corn, and the quantity purchased is consequently more highly sensitive to the influence of price changes. This being the case, it is reasonable to expect an increase in the price of cotton—necessitated by an increase in the cost of the productive agent, labor—to affect sales more quickly and to a greater extent than an increase in the price of corn brought about by this same increase in the cost of labor.

Scarcity and Costs of Production. We have several times noted the fact that price is the outcome of the demand for a good, on the one hand, and the supply of that good, on the other. In Chapter 12 we discussed

in detail the way in which utility affects price through its effect upon demand. The present chapter, and the three which follow, describe the manner in which scarcity, operating through supply, influences price. It should be borne in mind throughout our discussion that a price is paid for a commodity only because there is a scarcity of the commodity, and that the commodity is scarce only because the productive agents used in its making are scarce. On the supply side of price, therefore, we get back finally to the scarcity of the factors of production.

The Prices of Productive Agents. The principle of opportunity costs explains the distribution of these factors (or agents) throughout the general field of production. First of all, the *total quantity* of a given factor—say, labor of a given grade—will be divided among industries wishing to use that factor, in such manner as to equalize the price that must be paid for the factor by all industries that employ it. When the productive agents are thus distributed and employed, there are brought into existence various quantities of different commodities, which must sell at prices sufficiently high to cover all payments for the factors used in their production. The prices obtainable for these commodities do not *directly* determine the prices that will be paid for the agents used in their production, but the prices that the commodities command do determine, on the basis of opportunity costs, the distribution of these scarce agents among the several industries desiring to employ them. The total demand for an agent is the sum of the demands of all who employ it in alternative uses. Since the agents of production are desired not *on their own account*, but only because of their usefulness in producing other goods, it is customary to say that the price paid for the use of an agent is *derived* from the prices of the finished goods in the production of which it is employed. That is, the price paid *throughout industry as a whole* for a certain kind of productive agent is derived from the prices that can be had for the several commodities which the agent helps to produce. But this price will be high or low depending upon the relationship between the *total supply* of and the *total demand* for the agent.

The Prices of Finished Goods. The price of an *individual commodity* such as cotton, looked at from the side of supply, is affected by the costs of production of that particular commodity. These costs are the total of the prices (or costs) that must be paid for the use of all factors entering into the production of the good. If the factors used in growing cotton are expensive, less cotton will be grown than would be grown if the factors were cheap, cotton will be relatively scarce, and the price will be relatively high. It is through their effects upon supply, then, that costs of production influence price. It appears from our analysis that the prices of the agents of production and the prices of the goods that these agents bring into existence are *simultaneously determined* on the basis of opportunity costs.

Fixed and Variable Costs. Total costs may be broken down into *fixed* and *variable* costs. Fixed costs are those which must be met regardless of whether the plant is running at full capacity, at less than capacity, or not at all. They include such items as interest on investment, obsolescence, salaries of "key" executives who must be paid if they are to be held, and some kinds of insurance and taxes. Variable costs are costs which vary in total amount with the volume of output. In the manufacture of shoes, for example, the leather and other materials, the skilled and common labor, and the power used, increase or decrease in quantity as production increases or decreases, though the change in total variable costs is not necessarily proportional to the change in the quantity of the product. But production may, and frequently does, change to a considerable extent without affecting the size of the physical plant, the number of highly paid executives, and certain other items. Consequently, outlays of this type are given the name "fixed costs." Fixed costs per unit of product may, at any given time, be determined by dividing the total of such costs by the total number of units produced. By adding this amount to the variable costs per unit, it is possible to get total average costs of production per unit.

TABLE 12. FIXED, VARIABLE, AND AVERAGE COSTS OF PRODUCTION IN SHOE MANUFACTURE

	When Operating at Capacity	When Operating at Less Than Capacity
Output	1000 pairs	800 pairs
Fixed costs (total)	\$2000.00	\$2000.00
Fixed costs (per pair)	2.00	2.50
Variable costs (total)	8000.00	6600.00
Variable costs (per pair)	8.00	8.25
Total average costs (per pair)	10.00	10.75

Influence of Fixed Costs upon Average Costs. The significance of fixed costs may be seen by reference to Table 12, in which are figures relating to the production of two quantities of shoes in a factory equipped to turn out 1000 pairs a day. This plant has total fixed costs amounting to \$2000 a day, or \$2.00 a pair when distributed over the 1000 pairs of shoes that are made daily when the plant is operating at full capacity. The variable costs are \$8.00 a pair when this quantity is being manufactured. With the factory making its capacity output of 1000 pairs a day, the total average costs are \$10.00 per pair. But let us suppose that the conditions of demand are such that the output must be cut down to 800 pairs a day. The *total* variable costs are now lower than before, because less leather, labor, power, and other essentials are being used. However, the variable costs *per unit* of output may be higher, since the unit costs of

some of these things may increase when they are purchased in reduced quantities. Assuming that these new variable costs are \$8.25 per pair of shoes, we now have \$10.75 as the total average cost per pair. Hence, we see the importance of running a plant at full capacity whenever fixed costs form a large proportion of the total costs of production.

Production at Less Than Full Costs. Total average costs of production include both variable and fixed costs. And price, *in the long run*, must be high enough to cover both kinds of costs—that is, *total* average costs of production, since otherwise a business will languish and eventually disappear. For a shorter period, however, it may pay to produce goods even though the price received for them is less than full costs. In the case of shoe manufacturing referred to above, if conditions of demand were such

TABLE 13. TOTAL, AVERAGE, AND MARGINAL COSTS IN THE PRODUCTION OF CORN

Output (bushels)	Total Costs	Average Costs	Marginal Costs
1,000.....	\$ 3,700	\$3.70	....
2,000.....	4,250	2.12	\$5.55
3,000.....	4,700	1.56	.45
4,000.....	5,050	1.26	.35
5,000.....	5,350	1.07	.30
6,000.....	5,600	.92	.25
7,000.....	5,850	.83	.25
8,000.....	6,140	.77	.29
9,000.....	6,470	.72	.33
10,000.....	6,850	.68	.38
11,000.....	7,290	.66	.44
12,000.....	7,780	.65	.49
13,000.....	8,330	.64	.55
14,000.....	8,940	.63	.61
15,000.....	9,640	.64	.70
16,000.....	10,440	.65	.80
17,000.....	11,390	.67	.95

that only \$9.50 a pair could be obtained, it would still pay to continue production, at least temporarily. For the fixed costs of \$2000 a day would have to be met whether there was any production or not; and, though full production at \$9.50 would mean a loss of \$500 daily, no production at all would mean a daily loss of \$2000.

If, on the other hand, production could be increased 10 per cent without any increase in the fixed costs, it would pay to manufacture the extra 100 pairs of shoes and sell them for less than the full costs of production—say at \$9.00—provided they could be disposed of in another market and not disturb the \$10.00 price for the regular output of 1000 pairs. For the additional 100 pairs would bring in \$900 a day, with a probable

outlay of something less than \$800 in variable costs (because of economies effected through enlarged purchases of the variable items), and with no addition to fixed costs. It is situations of this kind that encourage business concerns to "dump" goods abroad, selling in the foreign market at lower prices than in the home market.

Average and Marginal Costs. Costs of production may also be classified as *average* or *marginal*. We have already spoken of average costs, which are defined as *total costs per unit of output* and are obtained by dividing total costs by the number of units produced. Marginal costs are *the amount added to total costs by producing one additional unit of the good in question*.

This distinction is made clear in Table 13, which presents hypothetical total, average, and marginal costs of a farmer who specializes in the production of corn. The table shows, for example, that if 12,000 bushels of corn are produced, there will be total costs of \$7780, average costs of 65 cents a bushel, and marginal costs of 49 cents a bushel. The average costs are arrived at, of course, by dividing the total costs of \$7780 by the 12,000 units of output, or (to be exact) 64.8 cents; the marginal costs are the difference between the total costs (\$7290) of producing 11,000 bushels and the total costs (\$7780) of producing 12,000 bushels—divided by 1000, since we are dealing here with lots consisting of 1000 bushels each. We shall use the concepts of average total costs and marginal costs in the following chapter, in discussing the determination of competitive price in the period of current production.

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1. Define "equilibrium of demand and supply."
 2. Define "short run."
 3. What is the relation between short-run price and costs of production?
 4. Why cannot short-run price be higher than the figure indicated by the equilibrium of demand and supply, if competition is perfect? Why can it not be lower?
 5. What considerations influence sellers in deciding the price at which they will sell, and the quantity they will offer at this price?
 6. What considerations influence buyers in deciding the price at which they will buy, and the quantity they will take at this price?
 7. State and explain the Law of One Price.
 8. There is reference in the text to "general items" that enter into costs. What are these items? How are they related to what we have called the factors of production?
 9. Give several examples of "specific items" that enter into costs, and show the manner in which they are related to general items.
 10. State the theory of opportunity costs.
 11. What are "alternative costs"?

12. Give an illustration (not taken from the text) of opportunity costs in the field of labor.
13. Show that the principle of opportunity costs applies to all factors of production.
14. Study Fig. 15, and explain precisely what is indicated by these two demand curves, in so far as equalization of costs and distribution of the productive agents are concerned.
15. Through what means does utility influence price?
16. Through what means does scarcity influence price?
17. "The principle of opportunity costs explains the distribution of the factors of production throughout the general field of production." Explain.
18. The price paid for the use of an agent of production is said to be *derived*. Derived from what?
19. What are "variable costs" and "fixed costs"?
20. It sometimes pays to produce goods even though the price received for them is less than full costs of production. Explain.
21. Distinguish between "average costs" and "marginal costs."

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 12.

Price Determination

Under Competition (Continued)

COMPETITIVE PRICE IN THE LONG RUN

WE ARE NOW READY TO EXAMINE COMPETITIVE PRICE DETERMINATION IN THE *long run*. This is a situation in which supply is of the greatest importance. For the "long run" is a period of time sufficiently long to permit, on the one hand, an increase in the quantity of a given good through an enlargement of the producing plants or the entry of new producers into the field; or to permit, on the other hand, a decrease in the quantity of the good through the voluntary or enforced withdrawal of productive agents used in making the good.

Long-Run Supply and Costs of Production. A stock of a good that can be increased or decreased, because the period dealt with is long enough to allow adjustments to be made in the productive factors, is called "long-run supply." We shall find that under conditions of long-run supply there is a tendency for price to equal the average costs of production of the *optimum* firm—the firm which, to repeat a statement made in an earlier chapter,¹ "has the lowest average cost of production per unit, when all those costs which must be considered in the long run are included." This is the case because, in the long run, firms which fail to adopt the most advantageous size of business organization, and the most efficient methods of production generally, tend to be undersold and therefore to disappear from the industrial scene.

There is nothing either profound or mysterious about price equaling cost of production. If the price of a good continues for long to exceed appreciably the average costs of production, the profit realized by producers of the good—that is, the difference between unit sales price and average unit costs—will, under competitive conditions, almost certainly attract the attention of others looking for business opportunities. If the profit offers sufficient inducement, the firms already in the field will enlarge their productive capacity and new producers will venture into the field, the quantity offered for sale will be increased, and price will decline

¹ Chap. 9.

until the margin of profit is wiped out. Price therefore cannot, over a long period of time, exceed costs of production under conditions of perfect competition.

Nor can it continue for long to be less than costs of production, for this is a condition that would result in definite losses. Though some concerns, firmly intrenched and amply financed, can stand considerable temporary losses, others that are less fortunately situated will rather promptly be forced out of business. The result will be a decrease in the quantity produced, and a rise in price that will continue until the sales price is sufficient to cover all costs of production. The costs of production, then; are an amount about which long-run competitive price tends to fluctuate. For any considerable variation between price and production costs is corrected sooner or later by certain forces that set to work almost automatically whenever there is a discrepancy between price and costs.

The Nature of Costs of Production. Before going further, we must give attention to a question that has probably occurred to the reader, and one by which students of economics are often puzzled. Why, it will be asked, are enterprisers willing to produce goods if they receive for them no more than costs of production? For, according to a statement already made, an amount just covering these costs is as much as business men may expect in the long run to realize from the competitive production and sale of their wares. This amount, nevertheless, is sufficient to keep business men interested in producing goods. For costs of production consist of a figure large enough to cover all payments which must be made in order to secure the several factors essential to the productive process, including (as we have said) wages of management.

If total receipts from the sale of a product—that is, quantity times unit price—cover all necessary outlays, there is no reason why production should not be continued indefinitely. Of course, a business concern cannot hope to survive in the long run unless it can pay for the use of land, labor, and capital, as much as any other business can and will pay; for a failure to match the offers made by other enterprisers for the use of land, labor, and capital would inevitably result in the transfer of these factors to businesses presenting to the owners of the factors larger opportunities in the way of remuneration.

The Balancing of Profits and Losses. Owing to the existence of business risks (which we examined in Chapter 10), it is seldom possible to arrange matters so that receipts will *exactly* equal costs of production. They will at times exceed costs slightly, and at other times be somewhat less than costs. Obviously, business success depends upon the profits of “fat years” being in the long run at least as great as the losses of “lean years.” But it is likewise true that if profits consistently exceed losses, the surplus of profits over losses, as we have already noted, will result

in fresh competition and the eventual elimination of the surplus. For (it may be repeated) if total receipts could be made year by year to equal the total costs of production, there would be no need at all for profits.²

Long-Run Competitive Price Under Conditions of Constant Costs

Commodities are produced under conditions of (1) constant costs, (2) increasing costs, or (3) decreasing costs. We shall treat, in turn, long-run price under each of these three conditions. It will be found, as we have already said, that normal price in the long run tends to equal the average costs of production of the optimum firm; and this is true under all three of the conditions listed above.

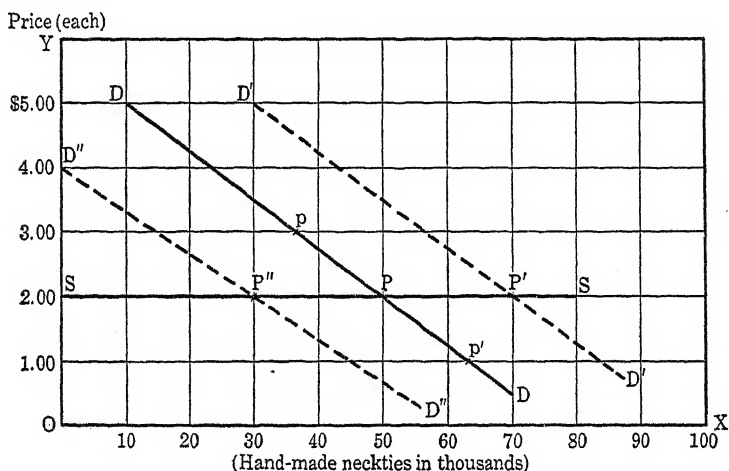


FIG. 17. LONG-RUN COMPETITIVE PRICE UNDER CONDITIONS OF CONSTANT COSTS

An increase or decrease in demand does not affect the price.

Characteristics of Constant-Cost Industries. The simplest of these conditions is that of constant costs. The term "constant costs" does not refer to a uniformity in costs as between various producers—a uniformity which is one of our conditions, however, since we are employing the concept of the optimum firm—but to a uniformity of costs *per unit of product*, regardless of whether the industry is organized to turn out many or few units.

It should be stated at the outset that this condition is one which is difficult to find in actual business practice. And yet there are some few industries in which an increase or decrease in the quantity produced does not change appreciably the costs of production per unit. These are businesses in which raw materials and machinery play a minor part,

² We shall examine this question again when we discuss the theory of profits (in chap. 23).

while labor is of great importance. Hand-made toys, hand-made cigars, and made-to-order clothing are commodities produced under substantially the conditions that have just been outlined. It is entirely possible that a considerable increase or decrease in the production of any of these articles *by the industry as a whole* would leave the costs of production per unit practically unaffected. It is improbable, however, that the production of any commodity could be increased or decreased indefinitely without some advantage or disadvantage appearing, which would manifest itself in the form of either lower or higher costs.

An Example of Constant Costs. Let us take, by way of illustration, the manufacture of neckties that are strictly hand-made. The supply curve, SS,³ in Fig. 17 indicates that these ties, regardless of the quantity produced, can be made at a cost of \$2.00 each. The demand curve, DD, cuts the supply curve at the point P. This means that 50,000 neckties can be sold at \$2.00 each, and that 50,000 can be produced at \$2.00 each. Since they *can be* produced at that cost, they *will* be produced in that quantity in the long run, if conditions of demand favor an output of this size. We are justified, therefore, in saying that the price paid in the long run for the 50,000 neckties will tend to be \$2.00 each, which is equal to average unit costs of production.

If demand had been greater than we have supposed—as great, say, as is suggested by the demand curve D'D'—manufacturers of neckties would have adjusted their output to meet this larger demand, and we should have had the production and sale of 70,000 ties, but still at \$2.00 each. For in order to produce the 20,000 additional ties the firms would simply have bought 40 per cent more material, rented 40 per cent more space, hired 40 per cent more workers of all kinds (including managers), and added 40 per cent to the very simple “tools”—scissors, needles, and the like—used in manufacturing hand-made ties. The result would have been a 40 per cent increase in total costs, and also a 40 per cent increase in total output, with, of course, the same (or *constant*) costs per unit of product.

D''D'' shows that a smaller demand would, again, have left costs of production, and therefore price, unchanged. For under these conditions of demand, 30,000 neckties would have been bought at \$2.00 each, and our supply curve shows that this quantity would likewise have been produced at that figure. Production in the long run may be relied upon to adjust itself to conditions of demand. If, with DD representing the actual conditions of demand, only 36,000 ties had been manufactured, they

³ Long-run curves, though labeled SS, may quite properly be regarded also as cost curves. For they represent the various quantities which the optimum firms, if given ample time to make necessary adjustments, could produce at various prices. Since the long-run concept provides ample time, we may take it for granted that these firms *will* supply these various quantities at their respective prices, if demand changes. Our SS curves therefore are true cost curves, as well as supply curves.

would have sold, as our figure shows, at \$3.00 each (see p); and if 64,000 had been produced they would have sold at \$1.00 each (see p'). But a maladjustment between production and demand could not exist in the long run, since it would correct itself fairly promptly; for the \$3.00 price (and \$1.00 profit) would attract new enterprisers, while the \$1.00 price (and \$1.00 loss) would discourage many producers and force some out of business. In the long run, therefore, price tends to equal costs of production; and under conditions of constant costs price tends always to be the same, whether output is large or small.

Long-Run Competitive Price Under Conditions of Increasing Costs

Increasing costs are most apparent in those lines of economic activity which employ large quantities of natural resources, or raw materials that are produced in large part through the use of much land. If inferior coal mines or oil wells must be called into use in order to provide society

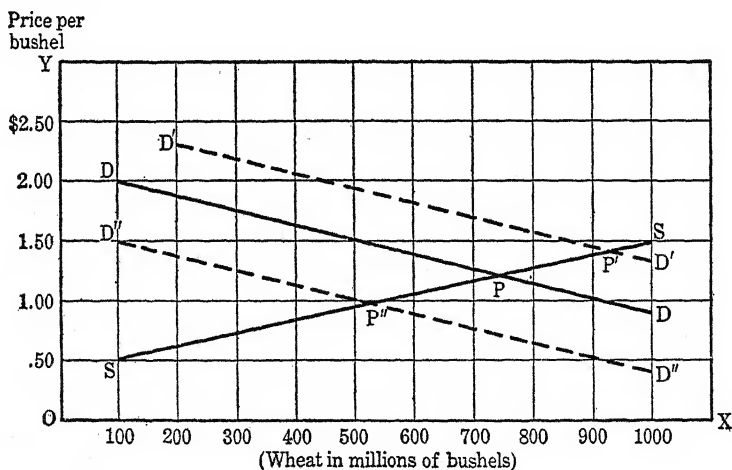


FIG. 18. LONG-RUN COMPETITIVE PRICE UNDER
CONDITIONS OF INCREASING COSTS

An increase in demand raises the price; a decrease in demand lowers the price.

with all the coal and petroleum its members insist upon having, the use of these poor mines and wells will probably result in higher average costs of production. And if increases in population lead to increased demand for agricultural products, it sometimes becomes necessary to cultivate land that is but poorly adapted to growing the required crops; as a consequence the average unit costs of production of wheat, corn, cotton, and other farm products are higher than they would be if smaller quantities were produced.

An Example of Increasing Costs. We shall take, for our example of in-

creasing average costs, the production of wheat, though any other agricultural crop would answer the purpose equally well, as would also certain lines of manufacture and public service. There is some land in the United States on which 50 bushels of wheat per acre can be grown, while the same amount of capital and labor employed on other wheat land produces but 15 bushels, or even less. But superior wheat land is scarce, and if the demand for this grain is so great as to require the use of inferior land, the average costs of production are bound to be higher than they would be if the total amount of wheat grown in this country were small.

Fig. 18 shows that growers of wheat could produce at average unit costs varying from 50 cents to \$1.50 per bushel, the average costs depending upon the quantity which the wheat-growing industry has been organized to produce. If it were organized to produce only 100,000,000 bushels, the average cost of production would be 50 cents. But this quantity, according to the demand curve DD, would command a price of \$2.00. Since we are considering price in the long run—a period sufficiently long to permit production to adjust itself to conditions of demand—it is unthinkable that there should long be a discrepancy between price and average costs of production. For in this “long run,” producers would have moved out to less and still less fertile wheat lands and produced there at higher average costs, just so long as these costs were no greater than the price obtainable for their product. The diagram shows that, in adjusting their productive forces to conditions of demand, they stopped at the point P, at which point the industry was organized to produce 750,000,000 bushels at an average cost of \$1.20; and that this quantity could be sold at \$1.20 a bushel. If demand—by reason, let us suppose, of a large population—had been so great as to be represented by the demand curve D'D', the average costs of production would have been \$1.40 (see P'), and 920,000,000 bushels would have been produced at an average cost of \$1.40, and sold at this figure. If, on the other hand, the conditions of demand had been those indicated by the curve D''D'', 540,000,000 bushels would have been produced at an average cost of \$1.00 per bushel, and would also have sold at \$1.00.

Industrial Reorganization in the Long Run. The costs of production with which we are here dealing are, of course, the average costs per unit of output, which are found by dividing total costs of production by the number of units produced. According to Fig. 18, the total costs of producing 100,000,000 bushels of wheat are \$50,000,000, making the average costs 50 cents per bushel; the total costs of 750,000,000 bushels are \$900,000,000, with an average of \$1.20 per bushel; and so on.

It is important to note that we assume, in discussing long-run competitive price, that *every substantial change in the quantity of production has been brought about through a reorganization of the industry*—that is,

through a readjustment of the forces of production to the changed conditions of demand.

If 750,000,000 bushels of wheat are to be produced instead of 100,000,000 bushels, the readjustment that is necessitated in getting out the larger quantity increases the total costs of production to a greater extent than the quantity itself is increased, and the average unit costs rise. Without attempting to give an adequate explanation of this increasing cost, we may suggest that the larger output involves the cultivation of inferior land and the more intensive use of the better grades of land, with the result that diminishing returns manifest themselves impressively in the form of both higher total costs and average costs per bushel of product.

Land and Increasing Costs. Increasing costs, then, are chargeable to a scarcity of productive agents of high grade, and this scarcity becomes increasingly serious as the consuming public demands more and more units of a finished commodity which requires in its production the use of agents that cannot themselves be increased in quantity. It is on this account that commodities, in the production of which land is an important factor, are usually subject to increasing costs; for land of the highest quality is extremely limited in quantity, and as poorer pieces of land are called into use (because of increased demand for the finished goods) efficiency in production declines and average costs of production rise. This is a matter upon which we shall touch again in our discussion of rent from land.

Long-Run Competitive Price Under Conditions of Decreasing Costs

We consider now a condition of supply which is in direct contrast to that of increasing costs. There are, happily, some lines of production in which an increase in output brings about a lower, rather than a higher, cost per unit of product. In our discussion of constant costs, we saw that price may be relied upon to remain unchanged—because average unit costs of production are unchanged—whenever an increase or decrease in output does not disturb the *relative proportions* of the productive agents. Once the best possible combination of the productive factors has been attained, any attempt to increase output by employing more of certain factors without employing more of all, would inevitably lessen the efficiency of production,⁴ and consequently increase the average costs of production. A reduction in output would have a similar effect if it upset the “ideal proportions” of the productive agents.

The growing of wheat, as is shown in our last example (see Fig. 18), was more costly per average unit when a large quantity was produced, because the additional units of capital and labor employed in growing the larger quantity were not accompanied by an equal number of units of high-grade wheat land, but were used in conjunction with units of

⁴ See the Law of Variable Proportions in chap. 6.

inferior wheat land. This example illustrates the truth of the first part of Professor Marshall's statement to the effect that while the part which nature plays in production shows a tendency to diminishing returns which result in increasing costs, the part which man plays shows a tendency to increasing returns which bring decreasing costs. If, in extending the cultivation of wheat to wider areas, it were feasible to adopt better agricultural methods which, though previously known, were impracticable until more product was demanded, then the diminishing returns due to the use of inferior land might be counteracted by the increasing returns resulting from the economies realized through a better use of labor and capital. It is in those enterprises in which men and machines are employed extensively—as, for example, in manufacturing industries—that (as Professor Marshall suggests) we find the most impressive instances of decreasing costs.

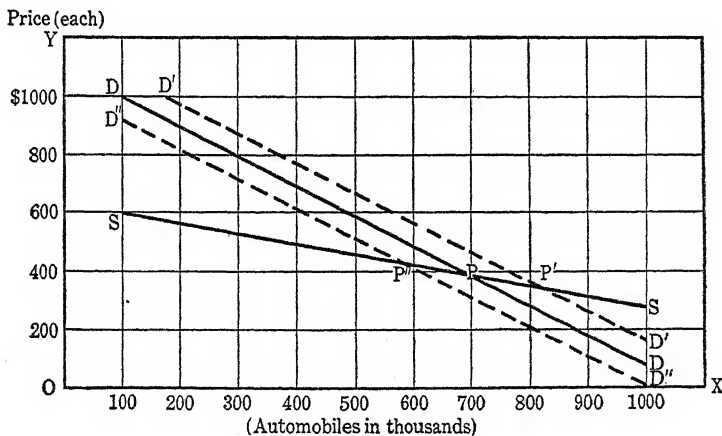


FIG. 19. LONG-RUN COMPETITIVE PRICE UNDER
CONDITIONS OF DECREASING COSTS

An increase in demand lowers the price; a decrease in demand raises the price.

An Example of Decreasing Costs. Automobile manufacture, which provides so many striking illustrations of modern economic tendencies, has shown itself to be an industry in which increasing returns (or decreasing costs) are realized. The phenomenal growth in the sale of automobiles during the past three or four decades has given automobile manufacturers an unparalleled opportunity to employ minute specialization and extensive mechanization, and to witness their influence upon costs of production. The ability to dispose of a progressively larger output has enabled manufacturers to take advantage of many economies and thus reduce average costs and selling price. For these reasons, we shall draw upon automobile production for our example of price determination under decreasing costs, recognizing, at the same time, that the industry

is not an ideal example of competitive production, since there are differences in the products turned out by the manufacturers in each of the several "price classes."

In Fig. 19, we have a hypothetical supply curve representing the average costs at which various quantities of automobiles can be produced. These average costs range from \$600 each in the case of an output of 100,000 cars, to \$280 each when production reaches 1,000,000.

This condition, then, is one of decreasing costs, with each increase in production bringing fresh economies, lower average costs, and therefore a lower selling price. Under the conditions set forth in our diagram, 700,000 cars would be produced at an average cost of \$400 each (see P), and because of competition would sell at that price. Had there been a smaller demand, such as that indicated by the curve D"D", only 580,000 automobiles would have been manufactured, and the average costs and selling price would have been \$440 each (see P"). If, on the other hand, the conditions of demand had been those shown in D'D', production would have been 800,000 cars with average costs and selling price (see P') at \$360. Obviously, this sort of thing cannot go on indefinitely; in every industry there is a point beyond which a further increase in the quantity produced will not result in a reduction in unit costs of production.

LONG-RUN COMPETITIVE PRICE UNDER CONDITIONS OF JOINT COSTS

We now consider the case of commodities that have a common origin and are produced not independently but jointly. Cotton fiber and cottonseed are "joint products," in the sense that one cannot be produced without the other; and this is true also of wheat and straw, meat and hides, butter and buttermilk, and many other articles.

If one of the products is so plentiful as not to command a price—as was once the case with cottonseed in the South and straw in the "Wheat Belt"—there is no problem of joint costs. When cottonseed is so lightly regarded as to be thrown away, and straw is burned to get rid of it, they certainly play no part in costs or in price determination. But when cottonseed, for example, is sufficiently desired and sufficiently scarce so that it—as well as the fiber—commands a price, the question arises as to how the price of each is determined. This question suggests, as questions of long-run price always suggest on the side of supply, an examination of average costs of production. And here we come face to face with joint costs, because we are dealing with two commodities that are produced jointly. A grower of cotton cannot produce cotton fiber without at the same time producing cottonseed, nor can he produce cottonseed without producing cotton fiber. The operator of a creamery cannot make butter without producing buttermilk, nor is he likely to produce buttermilk without making butter.

An Example of Joint Costs. How, then, is it possible to separate the costs of production of two articles that are jointly produced? Let us take, by way of example, the production of butter and buttermilk. Every item of cost, down to the final emergence of the butter in the process of churning, is necessary whether only butter, only buttermilk, or both butter and buttermilk, can find purchasers. Since all of the costs incurred contribute to the production of both commodities, and since no part of the cost is specifically chargeable to either, it is quite impossible to separate these joint costs and allocate to each its share, except on a purely arbitrary basis. The best that we can do, therefore, is to treat them frankly as in-

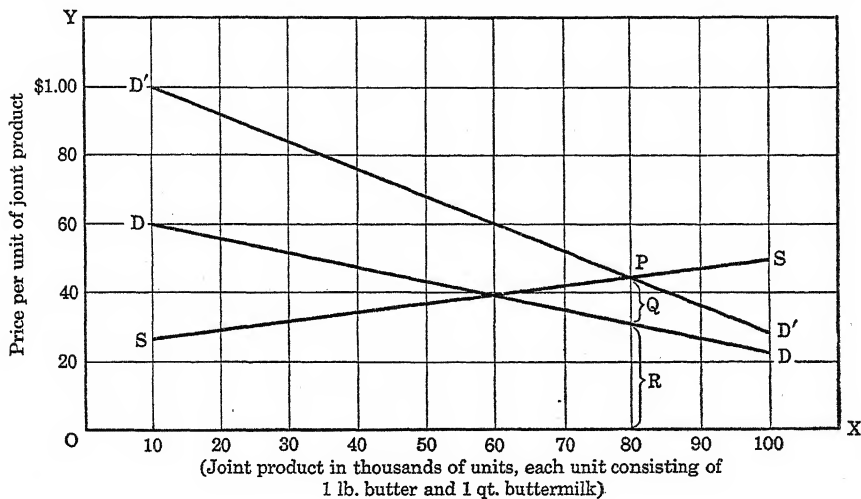


FIG. 20. LONG-RUN COMPETITIVE PRICE UNDER CONDITIONS OF JOINT COSTS

The price of each *unit of joint product* equals the average costs of production of the total quantity produced. The prices of the *individual commodities* jointly produced are determined by conditions of demand for and quantities of these several commodities.

separable, and speak of the average costs of production of various quantities of the *joint product* as "joint costs." The unit to be considered is not a pound of butter or a quart of buttermilk, but a combination of the two. When butter is churned from cream of a certain quality, it is found that a given quantity of the cream will yield approximately one pound of butter and one quart of buttermilk. We shall accept these figures as substantially correct, and in our explanation of joint costs shall think of a *unit of joint product* as consisting of one pound of butter and one quart of buttermilk.

Average Costs of the Joint Product. Turning now to Fig. 20, which is a graphic presentation of price determination under conditions of joint costs, we note that SS is an ascending supply curve, which indicates that

the production under consideration is one of increasing costs. A joint product, like a commodity that is produced independently, will in the long run tend to sell at a price equal to average costs of production. The supply curve in Fig. 20 shows the average costs at which different quantities of the joint product could and would be produced in the long run, assuming favorable conditions of demand. But when we see that, for example, 28 cents per unit would be the average cost if 10,000 units of the joint product were made, we must remember that this quantity means 10,000 pounds of butter plus 10,000 quarts of buttermilk. Similarly, 50 cents would be the average cost *per unit of the joint product*—that is, for one pound of butter and one quart of buttermilk—if 100,000 units of the joint product (100,000 pounds of butter and 100,000 quarts of buttermilk) were produced.

Thus far, the problem has been an exceedingly simple one. Having had no way to separate the average costs of producing butter and buttermilk, we have not attempted to deal with these costs separately, but have been content to say that the price received for both commodities must cover the average costs of production of both. If, as is indicated in Fig. 20, 80,000 units of the joint product were produced, then each unit (consisting of one pound of butter and one quart of buttermilk) would cost 44 cents, and would tend in the long run to sell for 44 cents. So far, so good. We are now through with costs of production as they relate to this particular problem, but we have yet to deal with the individual prices at which each of the commodities that are jointly produced would sell. We know that one pound of butter plus one quart of buttermilk would cost and sell for 44 cents, but on what basis would this total of 44 cents be divided between the two commodities?

The Division of Average Costs into Prices. The answer to this question will be found through an examination of our demand curves. The total demand curve, $D'D'$, is constructed in a peculiar way. First of all, the curve DD was drawn to represent the demand for butter. This curve shows, for example, that 10,000 pounds of butter could be sold at 60 cents a pound. But the production of this quantity of butter would result in the production also of 10,000 quarts of buttermilk. Hence, we have drawn the total demand curve, $D'D'$, to include the demand for buttermilk. The distance from the curve DD to the base line, OX , gives us the price per pound at which any given quantity of butter would sell; the distance between the curves DD and $D'D'$ indicates the price per quart at which any given quantity of buttermilk would sell. $D'D'$ therefore shows the demand for both butter and buttermilk. We see, then, that 10,000 pounds of butter would sell at 60 cents a pound (the distance between DD and OX), and 10,000 quarts of buttermilk would sell at 40 cents a quart (the distance from DD to $D'D'$). This means, of course, that the sale of 10,000 units of the *joint product* would take place at \$1.00 per unit, and that

of this amount 60 cents would be paid for the pound of butter and 40 cents for the quart of buttermilk.

Let us consider, now, the total demand curve, $D'D'$, in relation to the supply curve, SS . These curves intersect at the point P , showing that 80,000 units of the joint product would sell at 44 cents per unit. The distance from OX to the DD curve (indicated by the brace, R) tells us that the butter portion of each unit of the joint product will command 30 cents, and the distance from the DD curve to the $D'D'$ curve (indicated by the brace, Q) shows that the buttermilk portion of each unit of the joint product will command 14 cents.

Effects of Unequal Changes in Demand for Commodities Jointly Produced. This analysis of joint costs brings us to the conclusion that the total price received for the joint product will, in the long run, equal the average costs of production of the joint product. The separate costs of the several products jointly produced cannot be determined, but the price of each separate commodity can be ascertained on the basis of the supply of and the demand for that commodity. A change in the demand for one of the two commodities produced jointly, without a corresponding change in demand for the other, affects the prices of both, but in opposite directions.

If, in the long run, the demand for buttermilk should decline to such an extent that 80,000 quarts could not be disposed of at 14 cents a quart, but only at (say) 8 cents, this large quantity of the joint product would not continue to be produced, unless at the same time the demand for butter increased sufficiently to bring the price for 80,000 units up to 36 cents a pound. Otherwise, the total price of a unit of the *joint product* would not equal its average cost of production, as it must do if it is to be produced in the long run. If the demand for butter did not increase in the manner and to the extent indicated above, a smaller quantity of the joint product would, in the long run, be turned out. If, for example, the quantity were 75,000 units at the average joint-unit cost of 42 cents (as is shown on the SS curve), and if there were no change in the DD (butter) demand curve, it is clear that butter would sell at 32 cents a pound and buttermilk at 10 cents a quart. The industry would, of course, have been reorganized—in the long-run period of which we are speaking—to meet the conditions of changed demand. An *increase* in the demand for buttermilk (in place of the decrease described above), if there were no change in the demand for butter, would cause a rise in the price of buttermilk and a decline in that of butter, and eventually a readjustment which would cause the total price of a unit of the articles jointly produced to equal their average cost of production.

Costs of Special Processing. We assumed, in our illustration of butter and buttermilk, that no part of the joint costs was specifically chargeable to either of the two commodities, in the sense of being unnecessary in the

event that one of the two should not be salable. But it is safe to say that this exact situation seldom exists. Though we have gone ahead in our discussion on the basis that butter and buttermilk are completely "produced" when they have been separated by churning, we may now suggest that ordinarily the two products are not sold as they come from the churn; the butter is "worked" and packed in cartons, while the buttermilk may be bottled and delivered to soda fountains and restaurants for retail distribution. The costs of working and packing the butter may be determined without difficulty, since these costs apply not to both of the joint products but to one only; and the costs of bottling and delivering the buttermilk may likewise be ascertained.

Costs such as these are directly chargeable to the commodity in the "processing" of which they are incurred. And a commodity that is jointly produced in the main, but requires further processing before its production is completed, will not be bothered with unless it can be sold at a price which is at least sufficient to cover the costs of special processing. If, for example, the average cost of bottling and delivering the buttermilk were three cents a quart, all buttermilk that might be sold would have to bring, in the long run, a price of at least three cents; otherwise, it would cease to be specially processed and marketed.

Joint Supply and Joint Demand. What we have been calling "joint costs" are often referred to as "joint supply." Both terms are appropriate, since both relate to two or more commodities or services that are produced jointly.

Without describing further the conditions of joint supply, we may consider briefly an analogous situation in the field of demand. Some kinds of economic goods are consumed, and therefore demanded, jointly; and for such goods there is said to be a "joint demand." Bread and butter, collars and neckties, pencils and paper, needles and thread, and countless other commodities are so commonly "paired" that their close relationship in consumption is obvious. Joint demand applies, also, to producers' goods. Builders require stone, lumber, hardware, plaster, paint, glass, and a score of other materials in practically every construction project; bakers use flour, yeast, and salt in making bread; newspaper publishers must have paper and ink to feed their presses; and farmers employ seed, fertilizer, and insecticides *jointly* in producing a given grain crop.

It is clear, then, that what a purchaser often wants is not an individual good, but a number of different kinds of goods to be used in combination—and this is true of commodities and services for use in both consumption and production. Whether a consumer buys several commodities (say, grapefruit, bread, butter, eggs, and coffee) and combines them himself, or purchases a combination from an enterpriser (as he would do if he ate breakfast at a restaurant), the transaction is one of joint demand.

Similarly, the demand for a pleasure car becomes (in the hands of an automobile manufacturer) a joint demand for steel, rubber, glass, and a host of things which enter into the production of motor vehicles. Since producers *always* employ land, labor, and capital—and sometimes many varieties of each—in their enterprises, joint demand is the rule rather than the exception.

Joint Demand and Price. In our study of joint costs (or joint supply), we saw that the long-run competitive price of a unit of goods jointly produced (for example, one pound of butter plus one quart of buttermilk) tends to equal the cost of production of that unit of joint product. In like manner, the price of a unit of goods which consists of two or more commodities employed together in consumption or in production, tends to equal the cost of production of that unit. In the case of joint demand, but not of joint supply, the cost of each of the “joint” commodities is determinable, since each of the commodities used jointly is itself ordinarily produced separately; and by adding these individual costs, the cost of production of the combination is arrived at.

If automobiles were produced under conditions of strict competition, the long-run price of an automobile would tend to equal its cost of production—that is, the cost to the producer of the commodities and services used in its manufacture. Hence, this price would be affected by changes in the prices paid for steel and other materials demanded jointly by the automobile manufacturer. If steel should rise appreciably and permanently in price, the price of automobiles would increase and (assuming no change in their demand) fewer would be sold. A decline in the price of steel or of any of the materials jointly used, would have an opposite effect.

But unless the price rise in steel were very substantial, it is unlikely that the price of automobiles would be affected greatly, since steel is only one of many materials which enter into automobile manufacture. Of course, a simultaneous rise or fall in the prices of all the materials jointly demanded might cause a serious increase or decrease in automobile prices. And an increase or decrease in the demand for automobiles would tend to influence the demand, and hence the price, of steel and other materials that go to make up an automobile.

“Composite Supply” and “Composite Demand.” A given type of human want may often be satisfied fairly well by any of a number of commodities or services. Hunger will yield to any of hundreds of kinds of food, and these may be thought of as forming a “composite supply” of commodities to meet the food demands of hungry people. If the demand is more specific, requiring (say) meat for its appeasement, the composite supply may include beef, lamb, veal, poultry, and fish. Railroads, busses, street cars, and taxicabs offer a composite supply of transportation; coal, petroleum, and electricity constitute a composite supply of power; and

so on. Commodities and services which are almost equally acceptable to consumers, and are therefore ready substitutes for one another, provide the best examples of composite supply.

"Composite demand" is the sum or aggregate of the individual demands for a given commodity or service. In the preceding chapter we discussed the demand for laborers needed in both corn and cotton production. If we had included the demand for this type of worker in every conceivable field of a given market, we should have arrived at composite demand for this kind of labor. It should be apparent, therefore, that we have been dealing with composite demand whenever we have employed a demand schedule or demand curve, since such a schedule or curve, if complete, necessarily includes the demand of every possible purchaser for every possible use.

COMPETITIVE PRICE IN THE PERIOD OF CURRENT PRODUCTION

Our next task is to inquire into the productive activities which take place in what, for want of a better name, we shall call the "period of current production." The short run, as we have seen, relates to a *fait accompli*, in so far as production is concerned, since it deals with goods already in existence. The long run, on the other hand, is long enough to enable business men to increase their productive capacity by enlarging old plants or building new ones, or to decrease their capacity by failing to replace old productive facilities as they wear out. But the period of current production has to do with goods which may or may not be produced, depending upon the desirability or undesirability of carrying on production, as judged by business men already equipped to turn out the goods in question. The period of current production may be defined, then, as a *period of time too short to permit a change to take place in the quantity of plant and equipment available for making a given economic good, but sufficiently long to enable enterprisers to turn out as much of the good as they may think desirable, within the limits of the existing productive capacity.*

Causes of Productive Activity. A business man will ordinarily produce goods only if he sees, or thinks he sees, a financial advantage in so doing. This advantage may consist of either making profit or avoiding loss. That is to say, the producer will seek to *maximize his profits* if profits can be had, or to *minimize his losses* if losses must be taken. During the post-1929 depression, for example, some business enterprisers continued to produce goods which sold for substantially less than *total* costs of production, though for more than *variable* costs, while others closed down completely because the prices obtainable for their products were insufficient to cover even variable costs. But there were times during World War II when

many producers found it profitable to use their equipment very intensively, and thus turned out far larger quantities than they had ordinarily produced, even before they were able to increase the size of their plants.

Costs of an Individual Producer. We may observe the attempt to maximize profits or minimize losses by considering the case of an individual firm, using the information presented in Table 14 and Fig. 21. In the table are given several kinds of costs which would be incurred by a hypothetical manufacturer of brief cases, and the figure shows in graphic form as many of the essential data as could conveniently be included. In Fig. 21, average total costs and marginal costs, in which we are especially

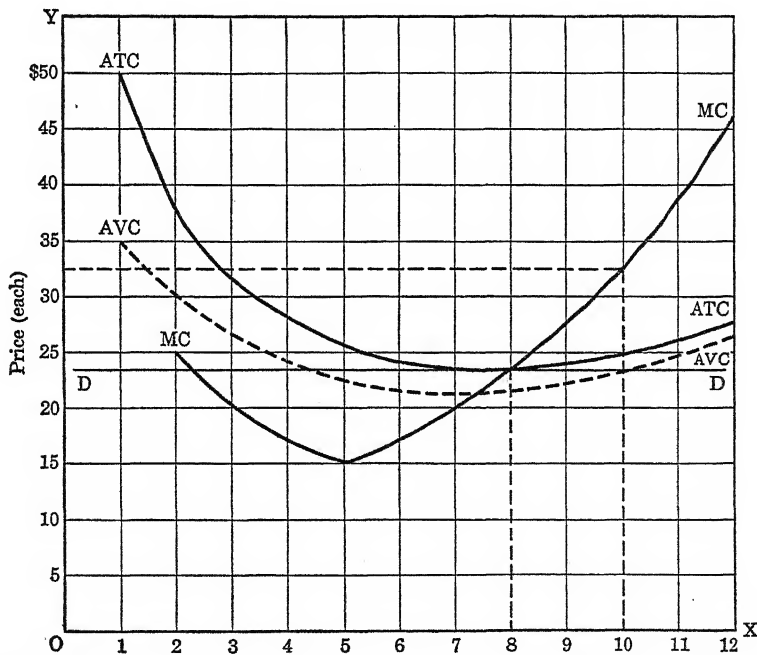


FIG. 21. COST CURVES OF AN INDIVIDUAL MANUFACTURER OF BRIEF CASES, AND DEMAND CURVE FOR HIS OUTPUT, UNDER COMPETITIVE CONDITIONS

interested in the present connection, are indicated by the ATC and MC curves, respectively. They show, as do the corresponding figures in Table 14, that both of these two kinds of costs decline *for a time* with each increase in output, and also that both begin to rise again, but at different points in the productive process.

The downward slope of the average total cost curve is attributable to the fact that, with every increase in output, the *fixed cost* portion of total costs is spread over a larger number of units of product than before. The marginal cost curve moves downward because the greatest

efficiency of the productive agents that are associated with variable costs cannot be realized unless and until the point of diminishing productivity in the use of these agents has been reached. In our example, agents of this kind are used most effectively when five of the brief cases are produced.⁵

TABLE 14. TOTAL, AVERAGE VARIABLE, AVERAGE TOTAL, AND MARGINAL COSTS OF AN INDIVIDUAL MANUFACTURER OF BRIEF CASES

Output (units)	Total Costs	Average Variable Costs	Average Total Costs	Marginal Costs
1.....	\$50.00	\$35.00	\$50.00	.....
2.....	75.00	30.00	37.50	\$25.00
3.....	95.00	26.66	31.66	20.00
4.....	112.00	24.25	28.00	17.00
5.....	127.00	22.40	25.40	15.00
6.....	144.00	21.50	24.00	17.00
7.....	164.00	21.33	23.43	20.00
8.....	187.50	21.50	23.44	23.50
9.....	215.00	22.22	23.95	27.50
10.....	247.50	23.25	24.75	32.50
11.....	286.00	24.64	26.00	38.50
12.....	332.00	26.42	27.66	46.00

When the output goes beyond five units, marginal costs begin to rise. Their rise *tends* to raise average total costs also, but this tendency is more than counteracted, for a while, by the continued decline of fixed costs *per unit of output* as these costs are spread over an increasingly larger number of units with each addition to total production. Hence, the ATC curve continues to decline for a considerable time after the MC curve has begun to rise. But this counteracting influence is not effective indefinitely. By and by, the ATC and MC curves intersect. This intersection occurs when the total output is eight units, and at this point average total costs are equal to marginal costs.

Cost Considerations Affecting Production. Let us now apply the concepts of average total costs and marginal costs to the case of a manufacturer who is planning his productive activities for the coming period of production. This manufacturer, we may assume, has been making brief cases for some years. He has the plant and equipment required for this type of manufacture. He has estimated his costs of production, which we may suppose to be those given in Table 14 and Fig. 21. Under these

⁵ We have deliberately oversimplified this example for purposes of greater ease in explanation and illustration, speaking in terms of a few units of a good which would ordinarily be produced in larger lots. The reader who prefers an example which smacks of reality can get it in this instance by multiplying the given quantities by hundreds or thousands, according to his idea of what would constitute *actual* production of a good of this kind.

circumstances, will this manufacturer decide to produce or not to produce; and if to produce, just how large an output will he plan to have?

The answers to these questions will be found in the relationship between this producer's costs of production and his estimate of the price his product will bring when it is ready for the market. In trying to predict the future price of brief cases, our manufacturer will probably rely chiefly upon prices paid for such goods in the past, possibly using the price obtainable during the past few months as a basis of calculation and modifying that figure somewhat if the coming market period seems likely, for one reason or another, to be worse or better than the one just ended. Regardless of the method used by this enterpriser to arrive at a probable future price for his product, he must have in mind some figure (say, \$23.50 a unit) if he is intelligently to adjust his production to anticipated demand.

The Individual Firm's Concept of "Demand." Moreover, we must bear in mind that "demand," to the individual firm in the period of current production, does not appear in the form of a demand schedule of the type familiar to all students of economic principles. To this producer, demand is not "a series of quantities that would be taken at a corresponding series of prices." It is, on the contrary, a *single price* at which he confidently expects to sell his entire output, whether large or small.

This is a reasonable view for a competitive producer to adopt, for, by definition, a competitive market is one in which the action of any one seller has no effect upon price. Since brief cases of this kind are made by a number of manufacturers and many units of the good will be thrown on the market, this individual manufacturer, by producing or failing to produce, will not be able to influence the price at which the coming stock will sell. Hence, he is justified in assuming that he will receive a uniform price per unit for his output, regardless of the quantity he produces. If, when the cases are ready to market, he should be able to sell any of them whatsoever at \$23.50 each, he would be able to sell his entire output at that unit price. His view of the situation is shown in Fig. 21, in which the demand curve *for this one producer's output* indicates that any quantity he might offer would be taken by purchasers at \$23.50 per unit.

Costs and Anticipated Price. Let us suppose, now, that this potential producer has decided upon the price which, in his opinion, the batch about to be produced will command when completed, and that he has before him the information about costs contained in our table and diagram. If he expects brief cases of this kind to bring \$23.50 each, he will doubtless decide to produce eight units, for this quantity can be made (as is shown in Fig. 21) at a marginal cost equal to the price. To produce more than eight units would mean a loss, since the marginal cost of additional units would exceed the price of \$23.50, with the result that each such unit would be adding less to the producer's income than to his costs. To produce fewer than eight units would also be unwise, since

this would mean stopping production at some point where price was in excess of marginal cost, and where each unit produced was consequently adding more to the producer's income than to his costs. Hence, we arrive at the conclusion that, at an anticipated price of \$23.50, the manufacturer would decide to make eight of the brief cases.

If he should expect the cases to bring more than \$23.50 each—say, as much as \$32.50—he would want to take advantage of this high price, and would undertake to produce the ten units which could be manufactured at an average total cost of \$24.75. If he stopped short of producing this quantity he would fail to make some cases which could be sold for more than their marginal cost, and if he produced more than ten he would raise his marginal cost above the \$32.50 that is obtainable for his product. Either of these courses of action would bring a loss which our manufacturer could avoid only by fixing his output at ten units. He would not be deterred by the exceedingly high marginal costs (\$32.50) involved in producing ten brief cases, for marginal costs hold no terrors for an enterpriser so long as average total costs are lower than marginal costs *and also lower than selling price*, as in the present instance. If, however, this enterpriser's study of future prospects should lead him to predict a price of \$22.50, he would be greatly concerned about marginal costs, *since they would in this instance be lower than average total costs*. This does not mean that he would refuse to produce at a price that is less than total costs; but he would do so only in case this figure was higher than the average variable costs involved in producing the quantity in question.

This is true because, though a producer cannot in this sort of situation avoid taking a loss, he would lose less by producing than by not producing. Since fixed costs must, by definition, be met whether goods are produced or not, the enterpriser who cannot get a price high enough to cover *total* costs will ask himself whether the price obtainable will more than cover *variable* costs. If the answer is affirmative, we may be sure that he will produce; for the price received will enable him to pay all *additional* costs resulting from producing instead of not producing—that is, variable costs—and leave a little over which he can apply to the payment of his fixed costs. He would therefore *lose less* by producing than by not producing—that is to say, he would in this way minimize his loss.

A Summary of Individual Policy in the Period of Current Production. We conclude, therefore, that the individual firm's guide to output in the period of current production is its marginal cost curve. Indeed, that portion of the marginal cost curve which lies *above* the average variable cost curve is a graph of this firm's *individual supply schedule*. In tabular form, it appears in Columns 1 and 2 of Table 15, and clearly consists of a series of quantities of this economic good which, in the period of current production, Firm No. 1 *stands ready to produce* at a corresponding series of prices. Of course, this producer will *actually produce* only one of these

several quantities. In his own best interests, he should and would produce the quantity which, in his individual supply schedule, is associated with the price he expects his output to command; for this is the quantity which at that price would maximize his profits or minimize his losses. Hence, he will consider it more advantageous to produce *at any point on the marginal cost curve that lies above the average variable cost curve* than not to produce at all. The intersection of the marginal cost and average variable cost curves is a *point of indifference*, for at this point the price is just sufficient to cover average variable costs, with nothing left over to help pay fixed costs. Below this point it would be better *not* to produce, since in that region the anticipated price is too low to cover even the average variable costs—costs which can be avoided by refusing to produce.

TABLE 15. INDIVIDUAL AND TOTAL SUPPLY SCHEDULES DERIVED FROM MARGINAL COST SCHEDULES OF INDIVIDUAL FIRMS IN THE PERIOD OF CURRENT PRODUCTION

At the Price of (each)	Individual Firms Stand Ready to Produce					Total Supply
	Firm No. 1	Firm No. 2	Firm No. 3	Firm No. 4	Firm No. 5	
\$17.00	....	....	....	4	6	10
20.00	....	7	....	8	10	25
23.50	8	9	7	9	11	44
27.50	9	10	8	10	12	49
32.50	10	11	9	11	13	54
38.50	11	12	10	12	14	59
46.00	12	13	11	13	15	64

Individual and Total Supply in the Period of Current Production. In any given period of current production, there will almost certainly be differences in the costs of production of the several individual producers. Some, for example, will have less modern machinery and tools than others, or will not yet have adopted the optimum size of business unit. For these and other reasons, the average total, average variable, and marginal costs of individual firms will differ somewhat, and consequently their *individual supply schedules* will differ.

We have indicated these differences in Table 15 by the inclusion of several additional firms. These firms would produce different quantities of these brief cases if they expected the price to be (say) \$23.50; and this is evidence that their marginal costs are not identical. However, in order to maximize profits or minimize losses, all five of these firms stand ready to produce at each of the several prices the quantities indicated in the table. Since this is the case, we can add the individual outputs of all firms at each price given, and thus arrive at *total supply* of the five firms, which we assume to be all of the producers in this type of enterprise.

Price Determination in the Period of Current Production. The first and last columns of Table 15 give us the series of prices and quantities which constitute supply. In Fig. 22 they appear in the form of a supply curve. We have added a hypothetical demand curve which, at the point of intersection, shows that there will tend to be a total output of forty-four units, which will sell at \$23.50 each.

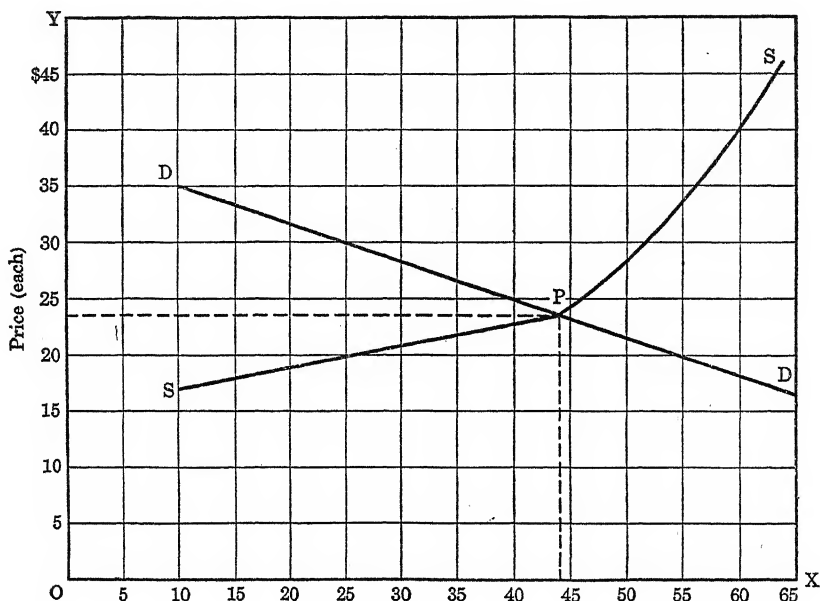


FIG. 22. EQUILIBRIUM OF DEMAND AND SUPPLY IN THE PERIOD OF CURRENT PRODUCTION, UNDER COMPETITIVE CONDITIONS

We may generalize to the extent of saying that, in the period of current production, *competitive price tends to equal the marginal costs of all firms engaging in production*. In our example, \$23.50 is the marginal cost of production of all producers, because each of the five firms has adjusted its individual output to the quantity it could produce at the marginal cost of \$23.50.

Anticipated and Realized Prices. We must now face the fact that the price expectations of individual firms may not be realized when the time to sell has arrived. Goods are actually sold, not in the long run or in the period of current production, but in the *short run*. The price that *tends* to prevail in the long run or in the period of current production is not necessarily the price that will actually be received. Indeed, a firm cannot be certain how well it has anticipated the future until the good is ready for sale, when the market price (which may differ from the price or prices anticipated by individual producers) will be determined by the supply and demand conditions of this particular short-run period.

If this price is higher than was anticipated by most producers, it will have a stimulating effect upon future production, and existing plant and equipment will tend to be used more intensively in the next period of current production. If, on the other hand, the price obtained is lower than producers in general expected to receive, plant and equipment will probably be used less intensively than before. And eventually a series of periods of current production, by influencing supply and therefore price in a corresponding series of subsequent short runs, may be expected to cause producers to make those adjustments which, when completed, lead to the long run. We shall now examine this process of adjustment.

DYNAMIC HAPPENINGS IN THE LONG RUN

It will be remembered that we defined the long run as "a period of time sufficiently long to permit, on the one hand, an increase in the quantity of a given good, through an enlargement of the producing plants or the entry of new producers into the field; or to permit, on the other hand, a decrease in the quantity of the good, through the voluntary or enforced withdrawal of productive agents used in making the good." We must now make clear the fact that the long run is an ideal concept, just as the notion of a perfect vacuum in the study of physics is an ideal concept. It is not, then, a condition which one is likely to meet in real life, any more than a perfect vacuum is such a condition, but it is a very useful concept nevertheless. When we leave the economics laboratory for the world of business, we come across a host of forces that are likely to influence, to a greater or lesser degree, the particular economic forces which we have singled out for examination. However, we are entirely justified in saying—as we have so often said—that long-run competitive price *tends* to equal average costs of production of the optimum firm.⁶ Another way of putting it is this: If at any time, under competitive conditions, the price of a good does not equal its average costs of production, certain forces will begin to operate to cause the price to move in the direction of its average costs of production.

In our study of short-run price, we emphasized the fact that there is no necessary relationship between short-run price and costs of production. Goods having once been produced, they will be sold on the market at the highest price the holders can secure; and this price, of course, will either equal average costs of production, or be greater or less than average costs of production. If, in a particular instance, the price received is exactly equal to average costs of production, producers will be encouraged to continue their operations as in the past, but there will be no special

⁶ To avoid unnecessary repetition, we shall omit the words "of the optimum firm" in the remaining pages of the present chapter. It should be understood, however, that in speaking of average costs of production in the long run we are referring always to the costs of the optimum firm.

tendency to increase their output. If price is less than average costs, the situation will be discouraging, and some producers may be forced out of business. If, however, price is higher than average costs, the profit which results will, in all probability, stimulate production, as we have already noted.

Dynamic Conditions in Agriculture. Let us consider these three possibilities as they work out in the case of an agricultural product, such as cotton. This commodity, like practically all economic goods, is produced in anticipation of demand. It is produced, moreover, by thousands of individual farmers, most of whom have but a slight idea—if, indeed, any idea—of the quantity of cotton that is being raised throughout the world, and the probable conditions of demand that will prevail when the crop is harvested and sold. Because of the absence of accurate knowledge on such matters, and because of unpredictable changes in weather conditions, it would be little short of marvelous if the short-run price of cotton were to equal precisely its average costs of production. If, however, this short-run or market price *should* happen to match exactly the average costs of production, both amounting to (say) 20 cents a pound, the effect on future production would be that which we have already suggested; namely, the quantity of cotton planted in the following year would probably approximate very closely the amount raised in the year that we have been discussing.

But if the market price, because of the large stock available or a decrease in demand, should be only 18 cents, or two cents less than average costs of production, this loss would almost inevitably bring about a reduction in the acreage allotted to cotton-growing in the following year. If, on the other hand, because of an unexpectedly small stock or an increased demand, the market price should be 22 cents a pound, this two-cent margin of profit would result in larger plantings in the future; for those who had benefited by this profit would be likely to increase the acreage given over to cotton, and others would be attracted into this field of production. Producers, then, are *in the long run* continually making adjustments in productive capacity, in the hope that conditions of supply and demand will bring them a price at least as great as the average costs of production. And it is these adjustments that are instrumental in driving price toward average costs of production.

Changes in Demand. So far as changes in demand are concerned, it need only be suggested that there is no assurance that demand, year after year, will remain fixed. It may easily be affected by changes in population, changes in desires, or changes in individual money incomes. Demand may either increase or decrease; and this fact adds greatly to the uncertainty of the situation and to the risks that producers continually face. As we noted in dealing with the period of current production, enterprisers never know exactly what conditions of demand will prevail in

the coming year (or month) in which the goods now in course of production must be sold. They never know exactly how much of the commodity will be supplied by other enterprisers. And yet they are continually making estimates of the conditions of demand and supply that may prevail at some future time, and are producing on the basis of these estimates. In this process of "guessing the future" and adapting productive forces to anticipated conditions, they are sometimes (as in the period of current production) hampered by a fixity of plant and equipment. But in the long run these limitations do not exist, since (by definition) there is ample opportunity in the long run to increase or decrease productive capacity.

Dynamic Conditions in Manufacturing. It is especially difficult to make adjustments quickly in businesses that involve the use of large quantities of capital. We may consider by way of illustration, a rapid increase in the demand for rayon cloth—an increase such as has taken place in the last decade or so—attributable to one of those changes in fashion by which our textile industries are so often seriously disturbed. Rayon manufacturers, in order to meet the increased demand and gain large profits, will endeavor to speed up production. In the long run, of course, if the popularity of rayon clothing continues, it will be possible to reorganize the industry and increase production greatly by the building of new mills, the purchase of new machinery, the development of an additional labor force, and like changes. But for a considerable time, manufacturers may experience great difficulty in enlarging their output; for it takes years, rather than months, to build enough mills, manufacture enough looms, and train enough workers to increase greatly the production of rayon cloth.

These manufacturers may, of course, bring into immediate use any out-of-date and partially obsolete looms that they happen to have on hand, recall for service ancient and inefficient workers who have been released in normal times, and perhaps operate night shifts in order to keep equipment working at capacity. They will doubtless do all of these things, provided the high prices that are obtainable for the cloth are sufficient justification for the expansion of production at high average unit costs. Indeed, however high these costs may run, there is every likelihood that there will be no let-up in expansion so long as the average unit costs are less than the high selling price made possible by the sudden increase in demand. Owing to the inability of production to adjust itself immediately and completely to changes in demand, there may for a relatively long time be a margin of profit between price and average costs of production. But as the long run wears on—that is, as the increase in mills, machinery, and labor force adds more and more substantially to the total output of rayon—this margin of profit will become smaller and smaller, and, assuming that the conditions of demand do not change in the meantime, will finally disappear.

But if the change in demand should be in the nature of decrease instead of increase, and if the decreased demand should appear likely to be permanent, retrenchment rather than expansion would be in order. Firms that were barely getting along when prices were good would be the first to disappear from the scene. Many concerns would doubtless continue to produce as long as the price obtainable was sufficiently high to cover the *variable* costs of production. But no concern can continue to produce indefinitely unless it receives for its product a price high enough to cover the *total costs* of production—that is, fixed costs as well as variable costs. The process of contraction, though often a painful one, is one that is easily understood. It consists of reducing in quantity the productive factors devoted to the industry—for example, machinery that wears out is not replaced, and workers who are no longer needed are laid off. In these and other ways, the productive capacity of the industry declines, output is lessened, and the unit price of the commodity rises. By and by, in the course of months or years as the case may be, the readjustment is complete, and price is again equal to average costs of production.

Readjustments in an Age of Large-Scale Production. Finally, we may note once more the fact that the period of readjustment may be a long one. New concerns do not pop into an industry the instant there is a slight margin of profit between selling price and average costs of production, and pop out again the moment it appears necessary to take a small loss. A century or more ago, these entrances and exits were made more rapidly than today, and the reason lies chiefly in the development of large-scale industry. In the early days of the factory system, going into business often meant the investment of only a few thousand dollars, whereas millions or hundreds of millions are now required for carrying on similar enterprises. Few business men could “break into” the steel industry today, even though they saw that large profits were being made there, since they could not secure the millions that would have to be invested in fixed capital. And once in, they would not be able to withdraw quickly, even though they were taking losses, because of their tremendous investment in equipment that would have to be sacrificed if they gave up. In industries that require little capital, the readjustments in production that are necessary to meet changes in demand may still be made fairly quickly, but in the large-scale industries that are so common today it may take a very long time for the discrepancies between price and costs of production to be wiped out. But whether the process is quick or slow, we may be certain that as long as there are any discrepancies of this kind, just so long, in a competitive industry, will there be economic forces at work remedying the situation—that is, pulling price in the direction of average costs of production.

1. Why do costs of production play so important a part in price determination in the *long run*?
2. What is the "optimum firm," and why does this firm tend to prevail in the long run?
3. "Price cannot, over a long period, exceed costs of production, under conditions of competition." Why not?
4. "Price cannot for long continue to be less than costs of production." Explain.
5. If goods sell merely for costs of production, why do business men continue to carry on business?
6. Under conditions of "constant costs," are the costs of various producers uniform, or is it the costs per unit of commodity (regardless of the quantity of output) that are constant?
7. Would you expect much or little labor, and much or little capital, to be employed in a business of constant costs?
8. Under conditions of constant costs, how does an increase in demand affect the price? A decrease in demand?
9. What is an industry of increasing costs?
10. Why is wheat production a business of increasing costs?
11. Under conditions of increasing costs, how does an increase in demand affect price? A decrease in demand?
12. What is the significance, in the discussion of long-run price, of the statement that "every substantial change in the quantity of production is brought about through a reorganization of the industry"?
13. What connection is there between the limitation of land of high quality and increasing costs of production?
14. "The part which man plays in production shows a tendency to increasing returns." Why?
15. Under conditions of decreasing costs, how does an increase in demand affect price in the long run? A decrease in demand?
16. What are "joint costs"?
17. Give at least three examples of commodities which are jointly produced.
18. Under conditions of joint costs, what is the relationship of average costs of production to price?
19. On what basis are the *total costs* of commodities jointly produced divided into prices for each of the several commodities?
20. Under conditions of joint costs, how will a change in the demand for one of two articles jointly produced, without a corresponding change in the demand for the other, affect the individual prices of the two products?
21. What is meant by "special processing," and how do costs thus incurred affect prices?
22. Describe "joint supply," "joint demand," "composite supply," and "composite demand."
23. Define the "period of current production."
24. Why are average total costs and marginal costs particularly important in the determination of price in the period of current production?
25. Distinguish between demand, as we have defined it, and the individual firm's concept of demand.

26. "Price tends to equal the marginal costs of all firms engaging in production," in the period of current production. How can this be true, since the costs of individual firms differ?
27. Distinguish between *anticipated* and *realized* prices of the individual firm.
28. If producers reap profits in a given year, what will be the probable effect of this profit-taking upon production in the following year? Would losses in a given year be likely to affect production the next year? Explain in both instances.
29. Would you expect the long run to be longer or shorter in the case of a large-scale industry than in the case of a small-scale industry? Why?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 12.

Price Determination Under Monopoly

IN THE LAST TWO CHAPTERS WE DISCUSSED PRICE DETERMINATION UNDER conditions of perfect competition. We must now give attention to short-run and long-run price conditions in which competition exists only partially, if at all.

We have emphasized the fact that perfect competition assumes the existence of *many* sellers and *many* buyers, so that the power of any one seller to influence the supply schedule, or of any one buyer to influence the demand schedule, will not be sufficiently great to have any effect upon price. Complete monopoly is just the opposite, for it assumes that there is but *one* seller or *one* buyer, or a combination of sellers or buyers—and this means, on the side of supply, the ability to limit the quantity offered for sale, and thus to secure a price higher than the competitive price would be. On the side of demand, too, there may be monopoly,¹ with the result that the sellers must accept a price lower than competitive price.

But though monopoly *may* relate to either the sale or purchase of a good, it is most often found in connection with the former. We shall limit our inquiry, therefore, to this aspect of monopoly, bearing in mind that complete monopoly is the exclusive control over the total quantity of any commodity or service in a given market, and is therefore the exact antithesis of perfect competition. Our present interest in monopoly has to do with the influence upon price of that “exclusive control over output” which is the outstanding characteristic of monopoly.

The Theory of Monopoly Price. Monopolists, like enterprisers producing under competitive conditions, are in business for the purpose of achieving economic success. Since economic success is ordinarily measured in terms of money, it is customary in this country to regard as a successful business man the enterpriser who has been able to make a

¹ Some writers prefer to call this condition “monopsony,” restricting the term “monopoly” to the supply side of price determination. In an earlier chapter, we noted the charge made by tobacco growers in the United States, to the effect that there are so few *buyers* of raw tobacco in this country that these few constitute a purchasing monopoly, and that the tobacco grower has often been obliged to sell his crop at a price dictated by this alleged monopoly, and sometimes at less than cost of production.

substantial profit. The notion that business men are anxious to secure large returns for themselves is indicated in the Theory of Monopoly Price, which says that the intelligent monopolist endeavors to market his product at a price which will bring him the *greatest possible total net return*.

Let us examine this italicized phrase. The words "total" and "net" are particularly significant, and neither should be omitted. It would be incorrect to say that the monopolist is interested in securing the *greatest possible total return*, for this might conceivably mean selling at so low a price per unit that (in the long run) price would just cover costs of production, and there would be no monopoly gain. Nor would it be safe to say that the monopolist seeks to get the *greatest possible net return*, since this might be interpreted as meaning net return per unit, and not total net return; and an extremely high unit price might limit sales so severely that, despite a handsome net return per unit, there would be a very small total net return. What the intelligent monopolist aims to do is to charge the price that will yield a *net return per unit* which, when multiplied by the number of units sold, will bring him the greatest possible total net return.

MONOPOLY PRICE IN THE SHORT RUN

In Chapter 13, we noted the fact that the costs of production play no direct part in price determination in the short run. The truth of this observation about costs is seen with particular clarity in an examination of *monopoly price* in the short run.

Monopoly and the Limitation of Goods. In considering short-run competitive price, we assumed the existence of a stock of goods which could not be increased, nor could it be decreased *except by sale*. None of this fixed stock, for example, could, under competitive conditions, be destroyed with the thought of thus limiting the quantity and raising the price. For under competition the sellers are entirely *independent* of one another, and no one seller will be willing to destroy his holdings and deny himself the return, however small, which he could realize from its sale even at a very low price. Hence, under competition the stock will not be reduced except by sale.

But if there is only one seller in the market—a case of complete monopoly—or if the sellers, though numerous, "get together" and agree that each will destroy a stated percentage of his holdings, it may be possible through this limitation of quantity to raise the price substantially. It should be added that concerted action on the part of several sellers, as described above, falls clearly under the heading of monopoly, since it constitutes an interference with free competition.

Determination of Short-Run Monopoly Price. Let us now note the dif-

ference between short-run price determination under monopoly, and under competition as already explained. We shall find it convenient to use first the data examined in our study of short-run competitive prices for cotton. Considering, then, the case of cotton, we now assume that the total stock of 22 million bales is controlled by one individual, a monopolist, instead of by a number of competing sellers, as in the original illustration. The conditions of demand are assumed to remain unchanged. How, then, does the introduction of monopoly control affect the situation? The answer is that everything depends upon demand and its relation to the quantity the monopolist—who now controls the entire stock—decides to sell. The quantity the monopolist disposes of will materially influence the price, whereas under competitive conditions no one seller exercises a sufficiently extensive control over supply to enable him alone to affect the situation appreciably.

Since the costs of production of this stock of cotton have already been incurred, the monopolist will aim to sell the stock in such a way as to bring him the *greatest possible total gross return*, regardless of what the cotton cost him. The costs of production therefore will have no part in determining the short-run monopoly price. The considerations influencing the monopolist will be similar to those which we said, in Chapter 13, would affect competitive sellers in deciding upon quantities to sell; that is, the monopolist will consider the possibility of getting a better price by holding all or a part of his stock until a later time, the promptness with which this better price is likely to be realized, the cost of storing the cotton until this later date, the chance that the cotton may deteriorate, and so on.

But an examination of the demand schedule for cotton, which appears in Table 11, indicates that the quantity which would bring the greatest possible total return is *the smallest quantity in the entire demand schedule*. For 10 million bales would sell for a *greater total amount* than 11, 12, 13, 15, 18, or 23 million bales. It is obvious, therefore, that the monopolist would not, under these conditions, sell more than 10 million bales; and if he decided to sell this amount, the price would be 40 cents a pound. The 12 million bales remaining from the original stock of 22 million bales would in this event be left in the monopolist's hands *at the close of this short run*, and would thus form a part of the stock of the ensuing period.

Of course, there is a possibility that this monopolist, expecting the price of cotton to be extremely high in the future, will decide to sell none of his stock, in which event the whole 22 million bales would remain unsold and would enlarge the stock of the following period. However, should he dispose of 10 million bales, which is certainly the largest quantity that he would sell, his monopoly control would bring him monopoly profits at the expense of society—unless his costs of production happened to be

as high as 40 cents a pound. From the social point of view, then, this monopoly situation would be less desirable than competition, in two ways: First, it would result in only 10 million instead of 15 million bales being made available for consumers; and, second, it would lead to consumers paying more for their cotton than they would have to pay under competition—that is, 40 cents a pound instead of 20 cents.

Price Determination for Fixed Supply. We now consider price determination for fixed supply, which is a special case of short-run supply and may be defined as *a quantity of a good that must be sold at a given time (if it is to be sold at all) at whatever price can be obtained for it.*

Let us assume, by way of illustration, that there is a fixed supply of 10,000 quarts of strawberries in a local market on a given Saturday, and that the berries will spoil if an attempt is made to hold them over until Monday. Table 16 is the demand schedule covering the situation.

TABLE 16. TOTAL RECEIPTS OBTAINABLE FROM SALES OF STRAWBERRIES AT VARIOUS PRICES

Price per Quart	Quantity That Would Be Bought	Total Receipts
30 cents	7,000 quarts	\$2100
25 cents	8,000 quarts	2000
20 cents	9,000 quarts	1800
15 cents	10,000 quarts	1500
10 cents	11,000 quarts	1100
5 cents	12,000 quarts	600

Under *competitive* conditions, the whole of this fixed supply must be sold, even though a part of it would bring in larger total receipts than the whole. This is true because it is in the hands of competing sellers, none of whom will destroy all or part of his holdings without a corresponding sacrifice on the part of all sellers. Nor, under competitive conditions, could they agree upon a *pro rata* destruction of their several holdings, for such an agreement would turn competition into monopoly. Therefore, we may be sure that under competition this fixed supply of 10,000 quarts of strawberries would sell at 15 cents a quart, since that is the highest price at which the total stock of 10,000 quarts could be disposed of.

But under monopoly conditions, which we are now considering, the monopolist is in a position to destroy a part of his stock if he finds that it would pay him to do so. If, then, we wish to arrive at the price that a monopolist will charge for a commodity which, because it is perishable or for some other reason, *must be sold at a given time if it is to be sold at all*, we need only calculate the *total receipts* that could be obtained by selling, at the prices appended, the several quantities listed in the demand schedule. The quantity which, at the price given, will yield the *largest*

total receipts is, under the conditions stipulated, the quantity which the intelligent, self-seeking monopolist will place upon the market. Whenever this quantity is smaller than the total stock of the good, it will be profitable to withhold the excess or even to destroy it to keep it from "spoiling the market."²

Referring again to Table 16, we see that the conditions of demand are such that the largest amount that can be realized by a monopolist controlling this stock of 10,000 quarts of berries is \$2100. This amount can be had by selling 7000 quarts at 30 cents a quart. What will happen to the remaining 3000 quarts need not concern us here. What we may be certain of is that the monopolist will not allow them to reach the market; for the demand schedule shows that the quantity which will bring maximum total receipts of \$2100 is 7000 quarts, and the monopolist, to reap the full benefits of his monopoly position, must limit his sales to that quantity. To sell 8000 quarts, for example, would mean a loss of \$100, and to sell 10,000 quarts—his complete stock—a loss of \$600.

Social Consequences of Monopoly Control. From these hypothetical cases of short-run prices under competitive and monopoly conditions, it is evident that monopoly may lead to high prices. Our competitive price for cotton is 20 cents a pound, and the monopoly price 40 cents. The competitive price for strawberries is 15 cents a quart, while the monopoly price is 30 cents. It appears that the odds are practically all in favor of short-run monopoly price being higher than short-run competitive price. There is a bare possibility that the two might be equal, but this could occur only if the monopolist decided to sell precisely the quantity that would be indicated by the intersection of the demand and supply curves under conditions of competition.

Since, in the short run, the existence of monopoly may easily lead to the destruction of economic goods in order to secure larger returns than could otherwise be had, monopoly clearly appears to be socially disadvantageous. But it is only fair to add that, in the long run, certain wastes of competition can sometimes be eliminated by monopoly control, as we noted in Chapter 9. Whether the public will benefit by such economies depends largely upon whether there is adequate governmental regulation of those industries which are not regulated by the force of free competition. On this point we shall have much to say when we discuss the problem of monopolies.³

² *Time*, *The Weekly Newsmagazine* (August 20, 1934, p. 15) told of "130 big French fishing smacks [that] put to sea at Douarnenez last week, every smack loaded to the gunwales with sardines. . . . A few hours later the 1,000,000 little dead fish had been tossed into the sea . . . to force French sardine buyers, who had offered 5¼¢ per lb., to pay the fisherman's agreed price of 6¢."

³ In chap. 48 (vol. 2).

MONOPOLY PRICE IN THE LONG RUN

In illustrating the determination of monopoly price in the long run, we shall again employ three examples which we used in discussing long-run competitive prices under conditions of constant costs, increasing costs, and decreasing costs. We now assume, however, a state of complete monopoly in which one producer has exclusive control over the production of the commodity in question, and may decide for himself whether he will organize his business so as to produce large or small quantities of the good.

Contrast Between Competitive and Monopoly Conditions in the Long Run. In Fig. 23, which illustrates price determination under conditions of constant costs, we have a supply (cost) and a demand curve which show that, under long-run *competitive* conditions, 50,000 neckties would be produced and sold at \$2.00 each. We made clear, when we discussed this situation in an earlier chapter, that the price could not be less than average costs since enterprisers would not in the long run continue to

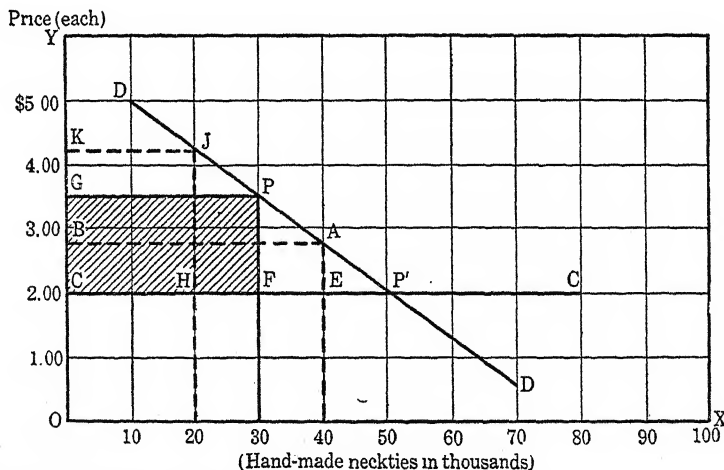


FIG. 23. LONG-RUN MONOPOLY PRICE UNDER CONDITIONS OF CONSTANT COSTS

Monopoly price tends to be that price which will bring to the monopolist the greatest possible total net return.

produce at a loss; nor could it be greater than average costs because a margin of profit would attract new enterprisers and they—again in the long run—would so increase the quantity offered for sale that the price would be brought down to average costs of production. But under conditions of *complete monopoly* there is no such thing as competition among producers. Hence, the monopolist is in a position to regulate his output so as to serve his own needs, which means, of course, so as to secure for himself the greatest possible total net return.

Our study of fixed stock—that is, price determination in the short run—showed us that, once a quantity of an economic good has been produced, the price that it will bring depends largely upon conditions of demand. If, with demand conditions such as are indicated in Fig. 23, our monopolist should produce 70,000 neckties and offer the whole output for sale, the fact that he is a monopolist would not save him from selling at a loss, for the demand curve shows that 70,000 ties can be disposed of only if the price is as low as 60 cents, regardless of the \$2.00 cost of production. In a predicament such as this, the monopolist would probably limit the amount of the commodity offered for sale, and might decide—since the costs entailed in production were gone beyond recall—to market that amount of his holdings which would bring the greatest *gross* return.⁴ This, according to the curve DD, would be 40,000 neckties, which would sell at \$2.80 each and provide a total revenue of \$112,000 to be applied to his costs of \$140,000. Or, since we have been discussing *short-run* price in the present paragraph, the monopolist might decide to sell some other quantity and take a chance on being able to market the remainder advantageously after the close of the short run.

It is extremely unlikely, of course, that an intelligent monopolist would so grossly misjudge the demand for his product; and we have suggested the possibility of so great a miscalculation merely to emphasize the fact that a monopolist, if he is to benefit by his monopoly power, must do so by adjusting production to demand. In making this adjustment he will try to see to it that there is a margin of profit between total receipts and total expenditures, and, in addition, he will endeavor to have this margin of profit represent the greatest total net return that can be extracted from the situation.

Long-Run Monopoly Price Under Conditions of Constant Costs. If our monopolistic necktie manufacturer should produce 50,000 ties, they would sell (as is shown in Fig. 23) at average costs of production, and there would be no monopoly profit. But if he restricts production, manufacturing 10,000, 20,000, 30,000, or 40,000 neckties, there will be in each of these instances a return over and above average costs. Consequently the monopolist, seeking not only a net return but the *greatest possible total net return*, will examine very carefully a demand schedule made up of his estimates of the prices at which various quantities of his product would sell, and on the outcome of his examination he will regulate his produc-

⁴ A startling example of the control of the quantity of a commodity that is placed on the market was the destruction, by the National Coffee Department of Brazil, of 31,082,000 bags (about 4 billion pounds) of coffee, in the three-year period following June, 1931. The quantity that was burned and dumped into the sea, for the purpose of holding up the price, was equal to more than fifteen months' consumption for the entire world and, at September, 1934, prices, was worth approximately a half billion dollars. (*The New York Times*, September 6, 1934.)

tion, manufacturing many units or few on the basis of the Theory of Monopoly Price.

The Calculation of Monopoly Profits. Let us suppose that he is able to estimate accurately in advance the conditions of demand represented by the curve DD in Fig. 23. Then, knowing that his costs of production per unit will remain unchanged regardless of the quantity produced, he is enabled to draw up a table something like Table 17. This table in-

TABLE 17. LONG-RUN MONOPOLY PROFITS UNDER CONDITIONS OF CONSTANT COSTS

Units Produced	Unit Prices Obtainable	Total Receipts	Total Cost	Monopoly Profit
10,000	\$5.00	\$ 50,000	\$ 20,000	\$30,000
20,000	4.20	84,000	40,000	44,000
30,000	3.50	105,000	60,000	45,000
40,000	2.80	112,000	80,000	32,000
50,000	2.00	100,000	100,000	.....
60,000	1.30	78,000	120,000	-42,000
70,000	.60	42,000	140,000	-98,000

icates clearly that it will pay the monopolist to produce 30,000 neckties, which he will be able to sell at \$3.50 each. For this quantity of product yields a monopoly profit of \$45,000. If only 20,000 ties were produced, the advantage realized through the higher unit price would be more than offset by the reduction in number of units sold; and if 40,000 were manufactured and sold, the advantage of the larger quantity would be more than wiped out by the loss in unit price. The proper number to produce, therefore, is 30,000.

If Fig. 23 were drawn with absolute accuracy, the greatest possible total net return could be ascertained by measuring the areas ABCE, PGCF, and JKCH, and determining which of the three is the largest. These areas represent the monopoly profit to be realized by producing, respectively, 40,000, 30,000 and 20,000 neckties; for each of the areas is made up of total receipts, less total costs of production. This being the case, it is apparent that the greatest of the three areas must, in a diagram that is correctly drawn, indicate the largest monopoly profit. This area will be PGCF, and (as we learned in the preceding paragraph) it will pay the monopolist best to manufacture and sell 30,000 ties.

The monopolist, like the manufacturer who operates under competitive conditions, produces in anticipation of demand. He is not able, therefore, to adjust his production perfectly to the demand schedule, because he cannot predict accurately in advance just what conditions of demand will prevail when he is ready to market his product. He proceeds, consequently, on the basis of the best information he can secure; and because his information is never complete he is likely to produce at one time a

little more, and again a little less, than the ideal amount. However, he is in a somewhat better position than the competitive producer to adjust production to the conditions of demand. For the latter is not only doubtful about the *exact* quantities that will sell at various prices, but he is also at a loss to know how much product will be thrown on the market by

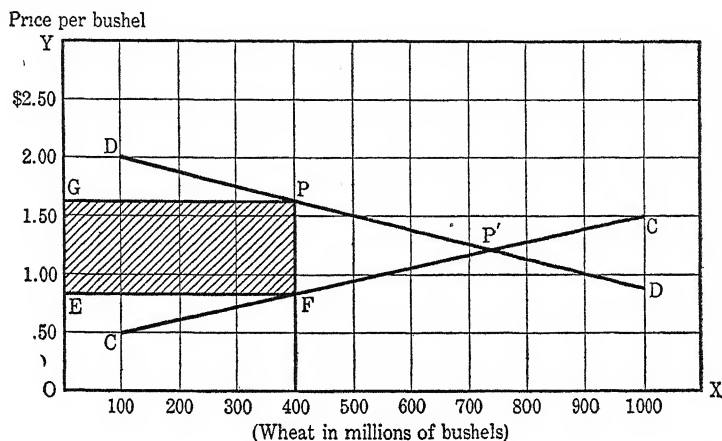


FIG. 24. LONG-RUN MONOPOLY PRICE UNDER CONDITIONS OF INCREASING COSTS

Monopoly price tends to be that price which will bring to the monopolist the greatest possible total net return.

his competitors. And—demand being what it is—it is the *total* quantity which if large makes for low prices, and if small brings high returns per unit. The complete monopolist, though unable to forecast demand perfectly, is at least able to control production, so that production in anticipation of demand is somewhat less risky under monopoly than under competitive conditions.

Long-Run Monopoly Price Under Conditions of Increasing Costs. In

TABLE 18. LONG-RUN MONOPOLY PROFITS UNDER CONDITIONS OF INCREASING COSTS

Units Produced (millions)	Unit Prices Obtainable	Total Receipts (millions)	Unit Costs	Total Costs (millions)	Monopoly Profit (millions)
100.....	\$2.00	\$200	\$.50	\$ 50	\$150
200.....	1.87	374	.62	124	250
300.....	1.75	525	.73	219	306
400.....	1.63	652	.84	336	316
500.....	1.50	750	.95	475	275
600.....	1.37	822	1.05	630	192
700.....	1.25	875	1.15	805	70
800.....	1.13	904	1.25	1000	— 96
900.....	1.00	900	1.37	1233	—333
1000.....	.87	870	1.50	1500	—630

Fig. 24 and Table 18, we have the data necessary for considering, as a problem in long-run monopoly price, the supply and demand conditions which we used, in Chapter 14, in discussing long-run competitive price in industries of increasing costs.

The point P' in Fig. 24 indicates, as did the point P in Fig. 18, that the long-run *competitive* price under these conditions would be \$1.20 a

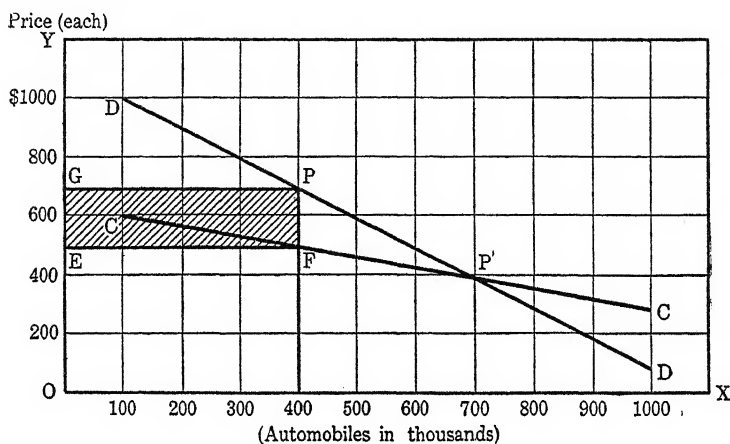


FIG. 25. LONG-RUN MONOPOLY PRICE UNDER CONDITIONS OF DECREASING COSTS

Monopoly price tends to be that price which will bring to the monopolist the greatest possible total net return.

bushel. But by reference to the last column of Table 18, we find that the long-run *monopoly* price would be \$1.63 a bushel, since this is the unit price at which the monopolist would realize the greatest possible total net return. The monopoly profit at this price would be \$316,000,000, an amount which is indicated in Fig. 24 by the shaded area, PGEF.

Long-Run Monopoly Price Under Conditions of Decreasing Costs. Reference to Fig. 25 and Table 19 enables us to compare long-run competitive

TABLE 19. LONG-RUN MONOPOLY PROFITS UNDER CONDITIONS OF DECREASING COSTS

Units Produced (thousands)	Unit Prices Obtainable	Total Receipts (millions)	Unit Costs	Total Costs (millions)	Monopoly Profit (millions)
100.....	\$1000	\$100	\$600	\$ 60	\$ 40
200.....	900	180	575	115	65
300.....	800	240	535	160	79
400.....	700	280	500	200	80
500.....	590	295	460	230	65
600.....	500	300	430	258	42
700.....	400	280	400	280	...
800.....	300	240	360	288	- 48
900.....	175	157	320	288	-130
1000.....	100	100	300	300	-200

and monopoly price under conditions of decreasing costs. The point P' in Fig. 25 shows that the long-run *competitive* price under the supply and demand conditions here pictured (which are the same as those given in Fig. 19) would be \$400. The *monopoly* price, however, would be \$700—the price indicated by the point P, and demonstrated in Table 19 to be the figure at which the monopolist would fare best, reaping at this price per unit a total monopoly profit of \$80,000,000. This monopoly profit is represented in Fig. 25 by the shaded area, PGEF.

Class Price. A demand curve, since it is a graphic representation of the Law of Demand, shows that, while some buyers will enter the market only if the price is low, there are others who would pay exceedingly high prices rather than go without the goods. Fig. 26 shows that the first 10,000 neckties of the lot could be sold at \$5.00 each, the second 10,000 at \$4.20 each, and so on down the line. To the seller of a commodity, it must seem a great pity that he cannot separate buyers into various price groups, and sell to each group at the maximum price which its members would pay if the quantity offered were conveniently restricted. If, for example, it were possible to sell the 40,000 neckties in batches of 10,000 each to the several price groups, the total profit would be considerably increased, as is shown by the figures in Table 20.

TABLE 20. MONOPOLY PROFITS UNDER CONDITIONS OF CLASS PRICE

Units Sold		Unit Prices Obtainable	Total Receipts	Total Costs	Monopoly Profit
First	10,000	\$5.00	\$50,000	\$20,000	\$30,000
Second	10,000	4.20	42,000	20,000	22,000
Third	10,000	3.50	35,000	20,000	15,000
Fourth	10,000	2.80	28,000	20,000	8,000
Total Monopoly Profit					\$75,000

Obviously, from the point of view of the seller, it would be very desirable to market a product in this fashion and thus take advantage of the highest price that each class could be induced to pay. It might be necessary, in order to evade the Law of One Price, to conceal from the groups that were paying the higher prices the fact that the same commodity was being sold to others at lower figures. But the average consumer is so poor a judge of the intrinsic worth of most commodities that the difficulties of concealing the true state of affairs are as a rule not great.⁵

If the ties were offered on four different counters in the same store at

⁵ The reader who is inclined to question this statement is referred to Stuart Chase and F. J. Schlink, *Your Money's Worth*, (New York, The Macmillan Company, 1929), for specific instances of human fallibility in retail buying.

the four different prices, it is probable that customers who ordinarily buy \$5.00 ties would see the batch offered at that price, and not the others. And even though they should note the similarity in appearance of neckties at different prices, they would be likely to attribute the difference in price to an imaginary difference in quality. It is entirely possible, then, that 40,000 ties could be sold in the manner that has been described, with the various classes of buyers paying different prices. Whenever a procedure of this kind can be followed, the possibilities of large profits are greatly increased. In our example above, a total of \$75,000 of monopoly profit has been extracted from the situation (see shaded portion of Fig. 26), whereas the best that could be done if all units were marketed at one price by a complete monopolist would be to secure \$45,000 of monopoly profit through the production and sale of 30,000 units.

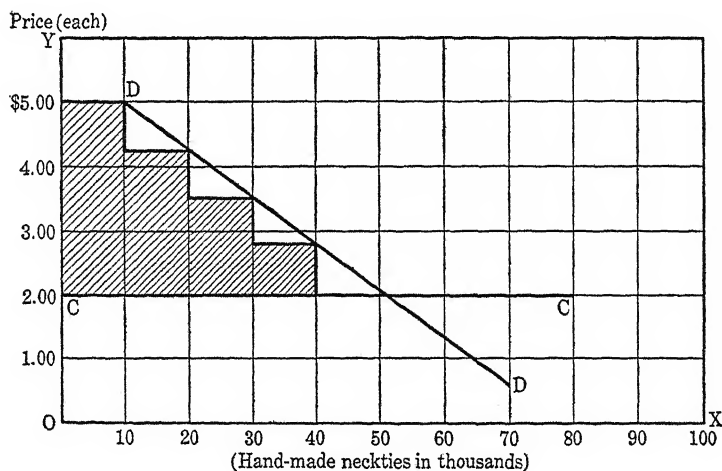


FIG. 26. CLASS PRICE

Through interference with the operation of the Law of One Price, it is sometimes possible to secure a large monopoly profit.

The outstanding characteristic of class price is an interference with the operation of the Law of One Price. Some writers, in discussing class price, have referred to marketing that is done in batches at different times. A favorite illustration is the publication of a given book at different prices. A popular "series" of a well-known publisher offers to the public, at one dollar a copy, a long list of books which originally sold for as much as four or five dollars each. Having found that purchasers have bought as many copies of a certain book as will be taken at a high price, the publisher arranges (after an interval of some months or years) to have the book appear in slightly altered form at a much lower price, and thus gives it a new lease on life.

But this, strictly speaking, is not class price, for there is here no viola-

tion of the Law of One Price, which relates, it will be recalled, to a *given time*. It is best to restrict our concept of class price to those cases in which different classes of purchasers are induced to pay different prices for the *same good* at a *given time*. The fees charged by lawyers and physicians are often based on the principle of class price, being adjusted to the paying capacities of clients or patients. Public entertainers also frequently modify their charges to meet the needs of the occasion, asking wealthy patrons more than others for identical programs. In cases such as these, class price is possible because the buyers have no way of knowing how much other buyers are paying, or because, even though they know, there is nothing they can do about it in the absence of competition. In the case of some goods—such, for example, as medical and legal services—the general public seems to accept price discrimination as unobjectionable and, indeed, socially desirable.

There are doubtless numerous instances of the same goods parading under different names at different prices, making it possible for sellers to charge class price. A classic example is that of forty-cent, fifty-cent, and sixty-cent coffee being sold from the same bin. Another charming illustration is vouched for by the Federal Trade Commission: It appears that the American Feather Bed and Pillow Company marketed the same quality of bedding under different names, at various prices. "The facts were that the bedding was all manufactured from the same grade of feathers, covered by the same grade of ticking, with no difference in grade, make or quality. As orders were received, a label, suitable doubtless to the purchaser's idea of the proper price to pay, was attached."⁶ Class price involves, then, some interference with competition; and this interference seems most often to depend upon the ignorance of the buying public.

Long-Run Monopoly Price and Elasticity of Demand. We have seen that the monopolist must, in the long run, adjust his productive capacity and his output to the conditions of demand, if he is to benefit by the exercise of his monopoly power. However much or little he may be able to influence demand by advertising or other means, he will certainly, if he is wise, do his best to analyze the demand conditions for his product, and will aim to turn out, in the long run, whatever quantity of the good will yield the greatest possible total net return.

His final decision may be to limit output greatly and charge a high unit price, or, on the other hand, to produce a large quantity of the good and sell it at a moderate price. The question of elasticity of demand will doubtless enter into his calculations.

If the demand is highly elastic, many more units of the good can be sold at a low than at a high unit price. Under these circumstances, it may pay the monopolist to think and act in terms of quantity production, since

⁶ *Ibid.*, pp. 83, 84.

a low price per unit may find more than adequate compensation in the vastly larger sales that can be made if the price is held down. If the demand is elastic, but only slightly so, it is less certain that a low price will yield a larger total net return than a high price, since the gain in the number of units sold may not be sufficient to make up for the loss incurred through keeping the unit price low. If the good is one which has an inelastic demand, a high price will not greatly reduce the quantity that will find buyers as compared with those who would purchase if the price were low. Hence, the monopolist will be encouraged to limit output (and hence the size of his plant and equipment) and charge all that the traffic will bear.

TABLE 21. TOTAL, AVERAGE, AND MARGINAL REVENUES OF A MANUFACTURER OF BRIEF CASES UNDER MONOPOLY CONDITIONS

Units Sold	Total Revenue	Average Revenue	Marginal Revenue
1	\$39.00	\$39.00	\$39.00
2	73.50	36.75	34.50
3	103.80	34.60	30.30
4	129.80	32.45	26.00
5	151.00	30.20	21.20
6	168.00	28.00	17.00
7	181.02	25.86	13.02
8	189.44	23.68	8.42
9	193.50	21.50	4.06
10	193.50	19.35	0.00
11	188.54	17.14	-4.96
12	179.76	14.98	-8.78

Of course, an inelastic demand schedule eventually reaches a point beyond which it becomes elastic; but until that point has been reached, the monopolist is safe (so far as increasing his profits is concerned) in reducing capacity, decreasing output, and increasing the price per unit. This is true because, so long as demand remains inelastic, every such reduction in output and increase in unit price, at one and the same time reduces the monopolist's total cost, increases his total receipts, and thus adds to his total net return.

As we have said, it may pay the monopolist, if the demand for his product is elastic, to sell many units at a low unit price rather than fewer at a higher unit price. If he adopts this policy, he will find both total costs and total receipts increasing with each drop in the unit price. By examining these costs and receipts at every feasible step in production, and stopping at the point at which the difference between these two items is greatest, the monopolist will arrive at the quantity and price which will bring him the greatest possible total net return, as we have demonstrated in Tables 17, 18, and 19.

MONOPOLY PRICE IN THE PERIOD OF CURRENT PRODUCTION

We now look into the calculations of the monopolist as he determines his course of action in a period of current production. In this examination we shall employ the concepts of average and marginal revenue, which require brief explanation.

Average and Marginal Revenue. Average revenue is simply *receipts per unit of goods sold*, and is found by dividing the total revenue received from the sale of a batch of goods by the number of units sold. Marginal revenue is *the amount added to total revenue by the sale of one additional unit of the good in question*.

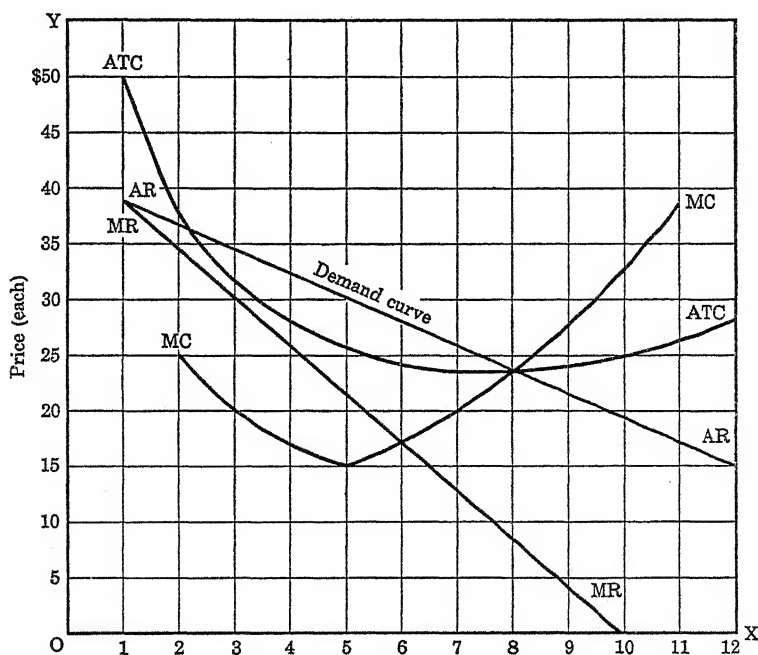


FIG. 27. COST AND REVENUE CURVES OF A MANUFACTURER OF BRIEF CASES, UNDER MONOPOLY CONDITIONS

In Table 21 are given approximate figures showing the total, average, and marginal revenues of a producer of brief cases under monopoly conditions. If, for example, we divide \$129.80 by the four units which yield that total revenue, we get an average revenue of \$32.45. And if we subtract from \$129.80 the total revenue which immediately precedes it—\$103.80—we arrive at \$26.00 as the amount added to total revenue by the sale of five as compared with four units, or a marginal revenue of \$26.00.

In Fig. 27 we use the same cost situation (indicated by the ATC and

MC curves) as was presented in Fig. 21. Our purpose in doing this is to show how the substitution of monopoly for competition affects output in a period of current production. The AR and MR curves represent, respectively, average and marginal revenues as given in Table 21. *An average revenue curve is always a demand curve*, and we have here given it both designations.⁷ This demand curve moves downward and to the right, as a *total* demand curve must in order to conform to the Law of Demand; whereas in Fig. 21 the demand curve (which showed demand for his *individual* output as seen by a competitive producer) was horizontal throughout. The horizontal demand curve is correct for a competitive seller, who rightly thinks that his entire individual output will sell at a uniform price. But the monopolist knows that, since he is the one and only seller, he will be able to sell more units at a low than at a high price; hence, his concept of demand is indicated by a demand curve of the traditional type.

Considerations Affecting Current Production Under Monopoly. Our monopolist, who is provided with a given quantity of plant and equipment, is now ready to decide upon his current production. Like the individual producer under competition, he finds in his marginal cost curve his best guide to production. Like the competitive producer, he will, if necessary, produce at a price lower than average *total* costs, but not lower than average *variable* costs. But since he is a monopolist, he will probably be able to regulate his production so as to cover total costs and reap a monopoly profit in addition. The general principle he should and would follow is to produce the quantity indicated by the intersection of his marginal cost and marginal revenue curves. In Fig. 27, the quantity indicated is six units, which may be expected to sell at \$28.00 apiece.

The intersection of the MC and MR curves is, of course, the point at which marginal cost and marginal revenue are equal. This is the point up to which our monopolist must go, but beyond which he must not go, if he is to secure the greatest possible total net return from this situation. By failing to produce as many as six units, he would fail to manufacture some brief cases which would sell for more than they cost, as is shown by the fact that the MR curve is higher than the MC curve up to the point of intersection. By insisting upon making more than six, he would produce some units which would sell for less than they cost, since the MR curve is *lower* than the MC curve beyond the point of intersection.

An examination of the total costs (Table 14) and total revenues (Table 21) associated with various outputs of this good leads to the same conclusion. It costs \$24.00 a unit, or a total of \$144.00, to manufacture six

⁷ Of course, the demand curve in Fig. 21 was also an average revenue curve, and likewise a marginal revenue curve, but it seemed best not to complicate the analysis at that point by mentioning this fact.

of these brief cases; and this quantity can be sold for \$168.00, with a monopoly profit of \$24.00. Similar calculations show that an output of seven units would yield \$17.02, and an output of eight units \$2.01, in monopoly profit. In a period of current production, then, price tends to be at that figure which will bring the monopolist the greatest possible total net return; and the output which will bring that return is indicated by the point at which marginal cost and marginal revenue are equal—the point of intersection of the MC and MR curves.

Consequences of Realized Prices. As may be true of any period of current production, the price anticipated by our monopolistic manufacturer may fail to materialize when the goods currently produced are ready for sale. He may discover that he has over-estimated the demand, and that the six brief cases he has produced can be sold only if he will take \$25.00 apiece, instead of the expected \$28.00. On the other hand, if he has underestimated the demand for his good, he may be able to sell at \$30.00, or at some other figure substantially higher than the price shown on his demand schedule for six units.

We have seen that exceptionally high or exceptionally low prices influence *competitive* producers in their decisions to utilize existing plant and equipment more intensively in succeeding periods of current production. They have, of course, a similar effect upon the *monopolistic* producer. This influence, it should be remembered, is not limited to the degree of utilization of existing equipment, but plays a part also in bringing about whatever long-run adjustments appear to actual and potential producers to be desirable.

DIFFICULTIES OF MAINTAINING MONOPOLY CONTROL

Conditional Nature of Most Monopolies. It is commonly said that a monopoly charges "what the traffic will bear," and there is doubtless a great deal of truth in this observation. But what the traffic will bear depends upon several extremely important considerations. There are practically no industries, except those protected by special governmental grants, that are completely immune to competition. Make the inducements sufficiently great—that is, let a monopoly use its power to extract very large surplus profits—and in most instances capital and managerial ability will enter the field in the hope of securing part of the surplus. This particular tendency is often called "potential competition" and is listed as one of the restrictions on monopoly.

But even if there should be no likelihood of formidable competition, the use of substitutes is almost always a "way out," if the monopoly should be inclined to abuse its control over output and thus over price. Few commodities that are left unconditionally in the field of private

enterprise are absolutely indispensable. If a coal monopoly charges extortionate prices, it is possible to turn to the use of oil or gas, or, for some purposes, to burn wood. Electricity, gas, and even kerosene may be utilized for lighting purposes. Motor busses can be, and will be, employed if rail transportation is unduly high. The influence of substitutes becomes effective, of course, through a modification of the demand schedule. Indeed, whenever a demand schedule is presented—whether in the form of a table or curve—due allowance has already been made for available substitutes and any other factors that would necessarily affect the shape of the demand curve or the data on which it is based. If worst comes to worst and no satisfactory substitute for a monopoly product can be found, there is always—in the face of great monopoly abuse—the remedy of government ownership or control. Indeed, several of the commodities mentioned in the present paragraph are frequently produced under the supervision of commissions representing the interests of the public. The tendency in this direction is shown in the so-called public utility field, in which railway, street-car, and bus transportation, telegraph and telephone communication, and the operation of waterworks, gas and electric plants, and other important “public services” are controlled, and sometimes owned, by a municipal, state, or national government.

Monopoly “by Authority.” Governmental “interference” in industries such as we have mentioned is by no means always the result of monopoly abuse. In many instances it is simply a recognition of the fact that some enterprises must be operated as monopolies if waste is to be avoided. Little would be gained, and much might be lost, by permitting competition among producers of water, electricity, gas, and street railway service. Such competition, in most cases, would result in greater capital investment, larger overhead costs, and consequently higher rates. This country has witnessed some of the evils of competition among public utilities and has, for the most part, decided that regulated monopoly is better than unrestricted competition in this particular field of economic activity.

Patents and Copyrights. Another kind of monopoly by authority is that which is enjoyed by individuals or business concerns by virtue of the possession of a patent or copyright. The United Shoe Machinery Company, for example, holds a number of important patents relating to shoe machinery, and is therefore able to exercise monopoly control over the leasing of equipment essential to shoe manufacture. It is the ownership of valuable patents that makes it possible to restrict the manufacture of Eastman Kodaks to the “proper” quantity, and thus to hold up the price. Illustrations of monopoly control through the possession of patent rights could be extended to include many thousands of examples. In many cases; of course, these monopolies are conditional, because of the existence of more or less satisfactory substitutes for patented goods. In such instances,

the condition is one of partial monopoly or imperfect competition, as we emphasize in the following chapter. The same remark applies to goods sold under the protection of copyright.

A copyright is very similar to a patent in its influence upon price. Books, plays, musical compositions, trade-marks, slogans, and a host of other items may be copyrighted, and their use restricted to the holder of the special privilege unless he chooses to share it with others. When a song, a play, or a book captures the public fancy as did, respectively, *Old Man River*, *Life with Father*, and *The Egg and I*, the monopoly power that goes with a copyright may be converted into hundreds of thousands, and sometimes millions, of dollars. For the exclusive control of the goods in question makes it possible, since competition cannot interfere, to secure for the one in control a large measure of monopoly profit. If, for example, the authors of *Life with Father* had not taken out a copyright, there can be little doubt that, once the play caught on, it would have been presented by dozens of theatrical producers. The result would almost certainly have been the disappearance of monopoly profit, because of price-cutting. But since the authors owned the copyright to the play, they were able to extract exceedingly large profits from the record-breaking run of this production.

"Good Will" and Monopoly Profit. In many instances, a trade name will do quite as much as superior quality to sell an article to the consuming public and to put it outside the field of competitive price. The words "Ivory," "Old Gold," "Pepsodent," and "Uneda" have a sales value which may be, but is not necessarily, dependent upon the excellence of the commodities to which they relate. If, for example, it were possible to manufacture a soap that was $99\frac{1}{2}$ per cent pure, it is more than doubtful that the new product would compete seriously with Ivory Soap which, unless the manufacturers have understated its excellence, is only $99\frac{44}{100}$ per cent pure! The modern answer to Juliet's query, "What's in a name?" can be found in the fortunes that have been built up through the use of copyrighted names such as those we have mentioned. Once a trade name has been impressed upon the public consciousness—usually by dint of high-pressure advertising—the owner of the copyright to that name can ordinarily exact a monopoly tribute from consumers, if only he continues (through magazine, radio, and other forms of advertising) to sing the praises of his wares.

We must not overlook the fact that the prestige of a particular commodity or business house can usually be gained only through the demonstrated ability of the commodity or concern to satisfy the public. If the quality of an article is satisfactory and is steadfastly maintained, and a firm's dealings with the public are consistently fair, it is reasonable to suppose that buyers will be unlikely to withdraw their patronage. Once the reputation of a concern is established, its satisfied customers return

to it almost automatically whenever additional goods are needed. Confidence in a product and a friendly feeling toward a business house are the stuff of which "good will" is made.

But confidence and friendship, sad to relate, are not always completely justified. In the world of business, as in other lines of human affairs, they may be misplaced. Lying advertisements have been known to win the patronage of the public and bring huge profits to unscrupulous enterprisers. Numerous examples, past and present, could be cited in proof of this statement. It is sufficient to mention the fact that many, and perhaps most, patent medicines are quite incapable of relieving the ills for which they profess to be remedies; that several popular toilet articles are sold largely on the basis of groundless fears that are aroused by sensational advertising; and that a certain cigar manufacturer used to suggest luridly, but untruthfully, that cigars other than his were commonly produced under extremely insanitary conditions—until he was restrained by the Federal Trade Commission from following this "unfair practice." Fortunately, however, good will is ordinarily short-lived, unless customers are given at least reasonably good treatment. In any event, good will while it lasts, and whether justified or not, is a source of monopoly gains. To the extent to which buyers patronize a business man who has won their confidence, but whose prices are higher than the prices of others, this business man is in a monopoly position and may reap a monopoly profit.

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1. Define "complete monopoly."
 2. What is the relationship between competition and monopoly?
 3. State the Theory of Monopoly Price.
 4. "Costs of production have no part in determining short-run monopoly price." Why is this true?
 5. Define "fixed supply."
 6. Contrast price for fixed supply under competition with price for fixed supply under monopoly.
 7. From our hypothetical examples of short-run competitive and monopoly price, what would you say about the social consequences of monopoly control in the short run?
 8. State specifically the method by which the monopolist is able to regulate price in the long run.
 9. Is long-run monopoly price likely to be higher or lower than competitive price? Why?
 10. The monopolist is "in a somewhat better position than the competitive producer to adjust production to demand." Why?
 11. What data must the monopolist have in order to decide upon the most advantageous quantity to produce?
 12. What is "class price"?

13. Explain the importance of the *time element* in class price.
14. Give several examples of class price.
15. What is the relationship between class price and the Law of One Price?
16. "An average revenue curve is always a demand curve." Why?
17. Indicate the significance of marginal costs and marginal revenue in the determination of monopoly price in the period of current production.
18. "There are practically no industries, except those protected by special governmental grants, that are completely immune to competition." Explain.
19. What is "potential competition"?
20. How does potential competition serve in some measure to protect the buying public from abuse by monopolists?
21. What argument is usually advanced in justification of monopoly "by authority"?
22. How does the issuance of patents and copyrights lead to monopoly?
23. Do you feel that patents and copyrights can be defended successfully as being economically justifiable? Explain.
24. What is "good will," how does it come into existence, and of what use is it?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 12.

Price Determination Under Partial Monopoly and Imperfect Competition

THUS FAR, OUR DISCUSSION OF PRICE DETERMINATION HAS ASSUMED THE existence of either *perfect competition* or *complete monopoly*. We now depart from these extreme assumptions in order to consider *partial monopoly* and *imperfect competition*.¹

PARTIAL MONOPOLY

The Rarity of Complete Monopoly. The assumption of complete monopoly, which was the basis of practically everything that was said in the last chapter, might almost be called an assumption contrary to fact—so difficult is it to find hard and fast examples of complete monopoly in the workaday world. There are in this country, to be sure, a few cases of governmentally owned complete monopolies, such as the coinage of money and the operation of the postal service; and there are a good many instances of exclusive grants by government (usually local), which restrict certain kinds of production (most often in the field of public utilities) to those persons to whom the franchises have been given, and thus rule out competition. But in industries in which government makes no effort to prevent competition, complete monopoly is extremely rare.

Indeed, Dr. Willard L. Thorp, an authority on industrial combination, in testifying before a federal investigating committee in December, 1938, was unable to cite more than one concern that exercised the exclusive control over output which, as we have said, is the distinguishing characteristic of complete monopoly. The organization named by Dr. Thorp

¹In discussing this phase of price determination, we have purposely avoided the rigorous, highly technical treatment followed by Robinson in *The Economics of Imperfect Competition* and Chamberlin in *The Theory of Monopolistic Competition*. Rather, we have handled the subject largely by the method of description, despite the limitations of this procedure, partly because an adequate mathematical presentation would have been unduly extensive, but chiefly because it seems unwise to burden an introductory textbook with material so difficult as to tax the capacities of advanced students of economics.

was the Aluminum Company of America,² which is said to have produced 100 per cent of all virgin aluminum manufactured in the United States,³ though this situation was changed by developments in aluminum manufacture that took place during World War II.

Partial Monopoly: "Duopoly" and "Oligopoly." Much more common than complete monopoly is the concentration of control in the hands of two or a few concerns which produce all or a very large part of the total output in a given field. A situation in which there are only two sellers is often called "duopoly"; and when there are more, but not many more, than two sellers, the term "oligopoly" is sometimes used. We may simplify matters somewhat by employing the expression "partial monopoly" in referring to incomplete control, whether the sellers happen to be two only or a slightly larger number which is, however, sufficiently small so that any one of the few sellers may affect price by producing or refusing to produce. Dr. Thorp found a high degree of concentration (and, therefore, partial but not complete monopoly) in the following industries:⁴

Industry	Number of Important Companies	Percentage of Industry's Total Output Produced by These Few Companies
Automobiles.....	Three	86
Beef products.....	Two	47
Cans.....	Three	90
Cement.....	Five	40
Cigarettes.....	Three	80
Copper.....	Four	78
Corn binders.....	Four	100
Corn planters.....	Six	91
Flour.....	Three	29
Iron ore.....	Four	64
Lead.....	Four	60
Oil wells.....	Four	20
Plate glass.....	Two	95
Safety glass.....	Two	60
Steel.....	Three	60
Whisky.....	Four	58
Wood pulp.....	Four	35
Zinc.....	Four	46

Partial monopoly, then, is distinctly related to complete monopoly, but lacks the exclusiveness which characterizes that rare condition.

Short-Run Price Under Partial Monopoly

Under partial as under complete monopoly, a seller will seek to dispose of his fixed stock so as to secure the greatest possible total return.

² *The New York Times*, December 3, 1938.

³ *Ibid.*, November 6, 1938.

⁴ *Ibid.*, December 3, 1938.

Since the costs of production for this stock are already expended, they will not influence the holder's decision to sell or not to sell. Like the complete monopolist, whose short-run deliberations were described in the last chapter, the partial monopolist will weigh the relative advantages of selling now as against holding all or a part of his stock for sale in the next short run.

But in this process of calculation, he will be hampered by the presence of one or more other sellers in the market. In our example of short-run monopoly price, we saw that the complete monopolist would sell only 10 million of his total stock of 22 million bales of cotton, because the total receipts for 10 million bales were greater than for 22 million or any other quantity of his stock. If, however, this total stock were divided among several sellers, the situation would be greatly changed. It seems unlikely that they would decide separately to sell such quantities that the total amount offered would be the 10 million bales which would bring them the greatest possible total net return. And if they reached this goal through agreement, the condition would be one of *complete* and not *partial* monopoly.

We return, therefore, to the statement that the partial monopolist will make the best estimate he can of the most advantageous amount to market. The estimates of the two or more partial monopolists constitute the short-run supply which, in combination with the demand schedule for the period, determine what the price shall be.

Long-Run Price Under Partial Monopoly

The rarity of complete monopoly is an indication of the insecurity of monopoly status, and of the likelihood that the monopolist, in the long run, will encounter some degree of competition. This is true, also, of the partial monopolist, and this fact has a bearing upon the long-run productive activities of partial monopolists.

The Maximization of Profit Under Partial Monopoly. In the last chapter, we considered price determination for neckties produced under long-run conditions of monopoly. We showed, in Fig. 23, that the monopolist would gain most by selling 30,000 ties at \$3.50, if he had constant costs of production of \$2.00 per unit.

Let us now suppose that this substantial margin of profit has attracted one or more additional producers into the field, and that the newcomers together manufacture 10,000 neckties at this same unit cost of \$2.00. The situation that now prevails is pictured in Fig. 28, which shows a total output of 40,000 ties which, according to the demand curve, will sell at \$2.80 apiece. This price brings every producer a profit over and above costs of production, as is shown in the shaded portions of the diagram. However, the chief producer, with an output of 30,000 ties, now receives only \$24,000 in monopoly profit, as contrasted with the \$45,000 he formerly got when producing exactly the same quantity.

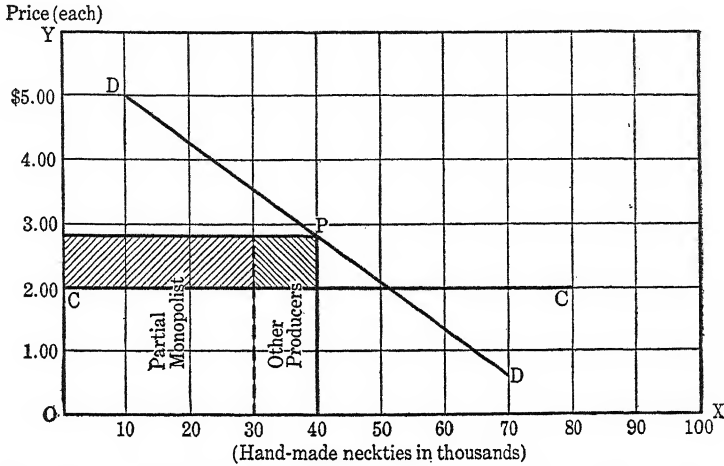


FIG. 28. LONG-RUN PRICE UNDER CONDITIONS OF PARTIAL MONOPOLY

A comparison of Figs. 28, 29, and 30 shows the possibility of securing a monopoly profit, even in the absence of complete monopoly control.

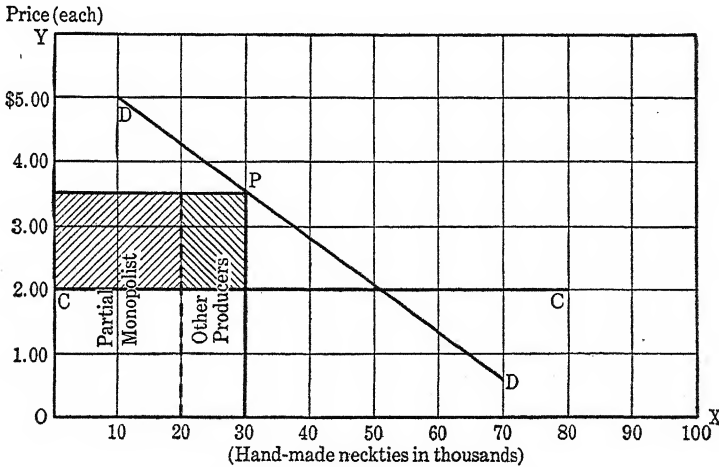


FIG. 29. LONG-RUN PRICE UNDER CONDITIONS OF PARTIAL MONOPOLY

A comparison of Figs. 28, 29, and 30 shows the possibility of securing a monopoly profit, even in the absence of complete monopoly control.

Long-Run Calculations of the Partial Monopolist. We may be sure that the "partial monopolist," as we shall call the original producer, will resent this invasion of his field of production. But what he will do to remedy the situation is difficult to predict. He may decide that the invaders will not expand their productive capacity further, and that it will pay him best to reduce his own output by gradually reducing his productive equipment through non-replacement of worn-out capital. In this event,

if he has guessed right, the total production of neckties may decrease, in the long run, to the quantity shown in Fig. 29. Here we find our partial monopolist turning out 20,000 ties as against a 10,000 total for all other producers. Both he and they have benefited by the reduction in output; for he now has a monopoly profit of \$30,000, and the other producers \$15,000, as compared with the \$24,000 and \$8000, respectively, which were theirs when the total output was 40,000 ties.

But the partial monopolist may have underestimated the aggressiveness of his competitors. He may discover, to his surprise and chagrin, that while he has been reducing his productive facilities his competitors have been adding to theirs, with the result that the total output, instead of falling to 30,000 units, holds firm at 40,000 units. Such a shift in productive capacity brings also a shift in the *proportion* of the total output that is produced by the partial monopolist. The situation is shown graphically in

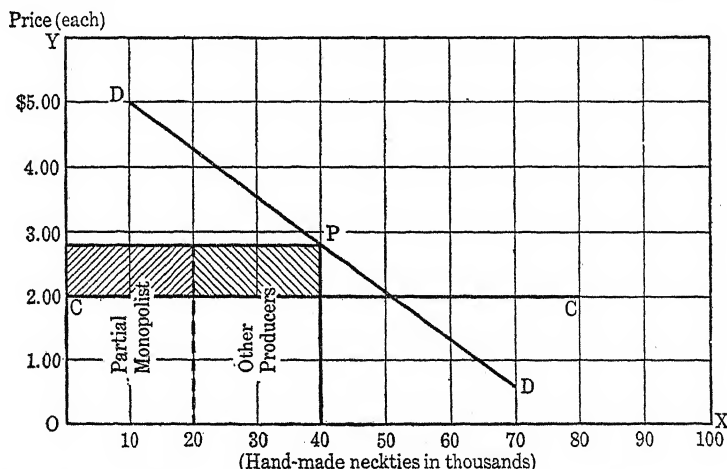


FIG. 30. LONG-RUN PRICE UNDER CONDITIONS OF PARTIAL MONOPOLY

A comparison of Figs. 28, 29, and 30 shows the possibility of securing a monopoly profit, even in the absence of complete monopoly control.

Fig. 30, which indicates that the partial monopolist now produces only one-half of the total output, and that his monopoly profit has been reduced to \$16,000, while the total monopoly gain of the other producers has been raised to the same figure.

Forbearance Among Partial Monopolists. From what has just been said, it is apparent that each of the several partial monopolists may attempt to gain at the expense of the others; but the aggressor must look for similar treatment from those against whom he schemes. So long as a margin of profit remains, it *may* pay one of these producers to increase his output and, by selling at a somewhat lower figure than the usual price, attempt to attract the patronage of his competitors' former customers.

However, this course of action is fraught with danger, for it is almost certain to be repaid in kind and with interest! Long-continued warfare of this type would, of course, defeat its purpose by driving price down to cost of production and eliminating monopoly profit entirely. Indeed, it might conceivably be carried into the field of cut-throat competition, with a particularly strong partial monopolist selling temporarily at less than cost of production, with the thought of eliminating his few competitors and establishing a complete monopoly.

But partial monopolists, on the whole, show little inclination to fight it out with others engaged in like production. Rather, they usually settle down to a sort of armed truce, with the tacit understanding that aggression will be met with reprisal and that it is best for all concerned to let well enough alone. If the partial monopolists are of approximately equal size and strength, they tend to divide up the field among them and produce a total output which will yield a satisfactory profit for all. If there are one firm of giant size and a number of definitely smaller concerns (as in the steel industry in the United States), the smaller concerns are usually content to follow the lead of the large producer in the matter of price. Here, again, the price is pretty certain to be high enough to provide some monopoly gain for all producers.

Long-run price under partial monopoly tends to be somewhat higher than it would be if perfect competition prevailed, and somewhat lower than under conditions of complete monopoly. It is likely to be near the high limit of *monopoly price* when there are very few partial monopolists in the field, and these few are highly "cooperative." It will tend to approach the low limit of *competitive price* when the number of partial monopolists is so large that difficulties are experienced in getting them to act in concert.

Price Determination in the Period of Current Production Under Partial Monopoly

Current production and long-run production are similar under partial monopoly, in that in both cases the partial monopolist must consider the productive activities of other partial monopolists. In the long run he has to decide whether to increase or decrease his plant and equipment, while in the period of current production the burning question is how intensively to utilize the productive capacity already in existence and at his command. In both cases he must take into account what the other producers will probably do, since the activities of each and all will affect the *total* quantity produced, and this in turn will affect the price the product will bring and the amount of monopoly profit.

Since we have already described the long-run calculations of the partial monopolist, we have only to consider the quandary in which the partial monopolist finds himself in the period of current production. His

position is in many ways like that of the complete monopolist pictured in Fig. 27. We may assume that he has the same ATC, MC, AR, and MR curves. But in one important respect the scene has changed; for the AR curve does not now indicate the demand for the output of one producer, but total demand for the output of all of the several partial monopolists. The possibility of extracting monopoly profit from this situation depends upon the extent to which this *total* output can be limited.

Under the conditions we have outlined, the partial monopolist cannot hope to fare as well as a complete monopolist. He could do so only if his rivals in the field refrained altogether from production, which would of course convert the situation into one of complete monopoly. Every addition made to total output by the several producers reduces the margin of monopoly profit, and monopoly profit disappears entirely when total output exceeds the quantity (eight units in Fig. 27) indicated by the intersection of the ATC and AR (demand) curves that takes place *after the ATC curve has ceased to fall and has begun to rise*. Additions to output beyond that point would mean production at less than average total costs, and would be unlikely though not impossible under partial monopoly.

The partial monopolist whose fortunes we have been following would presumably continue to produce currently so long as he felt that the price received would more than cover average variable costs. However, it seems improbable that this small group of individual producers would permit the situation to deteriorate to so great an extent. Instead, practicing the forbearance of which we spoke in the preceding section, they would tend to "stabilize" their individual outputs in such a way as to turn out, more often than not, in a period of current production, a quantity of the good which would bring some gain for all. As in the long run under partial monopoly, so also in the period of current production, price tends to be somewhat lower than it would be if the situation were completely monopolistic, and somewhat higher than a strictly competitive price would be. In the period of current production the price referred to is, of course, *anticipated* and not *realized* price.

IMPERFECT COMPETITION

It remains to examine the situation known as imperfect competition, which, as the name suggests, does not fully measure up to our definition of perfect competition. For imperfect competition refers to a condition in which, though there are many sellers offering a given product in a given market at a given time, some of them find it possible, in one way or another, to evade the thoroughgoing competition which sellers in a free market are, by definition, required to face.

The Nature of Imperfect Competition

Perfect competition implies that no seller is in a preferred position—that buyers would just as readily buy from any one seller as from any other, and are so situated as to be able to shift easily from seller to seller if even the slightest reason for making a change should develop. This means, of course, that the general conditions of the market are uniform, and that, specifically, the product itself is uniform throughout the market. For, as we said in our first chapter on price determination, *price applies to a given grade or quality of a given good, and not to that good in general.*

DIFFERENTIATION IN PRODUCT

Strictly speaking, if one seller's product differs even a little from the product of other sellers, it should be regarded as a *different product*, with supply and demand schedules all its own. But in the actual market place there are literally thousands of commodities and services, each of which, while differing somewhat from other commodities or services of the same general type, is yet so much like some of these as to constitute a reasonably satisfactory substitute for them. The result is competition—though not perfect competition—between two or more goods which are not strictly uniform.

Economic Advantages of Differentiation. Whenever there are real or imaginary differences of the kind mentioned above, the seller who holds an advantage is likely to try to make the most of it. For if he can convince buyers that his product is better than that of other sellers (regardless of whether, in reality, it is or is not better), he may be able, by reason of this differentiation in product, either (1) to sell at a somewhat higher price than is asked by the others, or (2) to sell at the price charged by others a far larger quantity than he could dispose of, were the buying public not persuaded of the superiority of his product.

Differentiation: The Distinguishing Mark of Imperfect Competition. The earmarks of imperfect competition are (1) differentiation, and (2) the existence of many sellers. Since there are also many sellers under perfect competition, we may seize upon differentiation as the outstanding characteristic of imperfect competition.⁵ But it is a differentiation that operates only within fairly narrow limits, for if the differences between the products offered by sellers are so great that each product is not a "close substitute"

⁵ We are not overlooking the fact that complete monopoly constitutes differentiation in its most extreme form, and that partial monopoly, though we have considered it as relating to a uniform product, may consist of a few sellers offering differentiated products for sale. However, it seems fair to say that the distinguishing feature of complete and partial monopoly is a *limitation in the number of sellers*, whereas in imperfect competition it is *differentiation in the product itself or the special conditions surrounding its sale.*

for the others, the products should be treated individually and not as "the same product."

Genuine Differences in Competing Products. There are relatively few markets in which commodities are so completely standardized as to warrant the statement that they are entirely uniform. Of course, it is possible, in the various commodity exchanges, to buy wheat, cotton, sugar, coffee, and certain other goods on the basis of standard classifications, with every assurance that the article quoted by one seller is identical with that quoted by another. It is also feasible for big concerns to order large quantities of machinery, raw materials, and other essentials, according to written specifications, and thus avoid differentiation of product by the sellers from whom they ask bids.

But the average consumer, buying at retail in small quantities, is frequently required to choose between many varieties of a given type of good. A housewife, let us say, finds that the grocers in her community handle bread baked by a half-dozen different concerns. Four of these brands are "ordinary" bread and sell at 10 cents, the other two at 11 cents, for loaves of equal weight. But of the 11-cent brands, one contains a slight amount of butter and the other a small quantity of milk. Here, then, is a case in which, though there is a high degree of competition, since all six brands of bread are tasty and wholesome, there is also differentiation, for both bakers of 11-cent loaves may claim special merit for their products as compared with the cheaper bread. Moreover, each of these two bakers might in all sincerity insist that his bread is superior to that of the other, because of its content of butter or milk, as the case happens to be.

The Intermingling of Competition and Monopoly. It is evident that the market just described has in it elements of both competition and monopoly. No one will deny that these six brands of bread have points of similarity, and might fairly easily be substituted for one another. On the other hand, it is equally clear that the two 11-cent brands differ one from the other, and that they differ still more widely from the other four. In so far as these "different" brands are similar (as they unquestionably are, in their ability to meet the demand for bread), the market leans toward competition; to the extent to which they differ (as they do in certain minor respects), the situation smacks of monopoly. But since it seems to be more largely competitive than monopolistic, we do not hesitate to call it a condition of imperfect competition.

Though we have assumed that only six brands of bread are offered for sale in this hypothetical market, it is reasonable to suppose that there are a number—perhaps a score or more—of grocers. Not only the six brands, but also the twenty grocers, compete with one another, and the result is a very considerable amount of competition, but admittedly not perfect competition, in the sale of bread. The availability of the "milk"

bread may keep the price of "butter" bread from going above 11 cents, and the presence of the "butter" bread may in turn hold down the price of "milk" bread to that figure. In like manner, the possibility of substituting the lower-priced brands may exercise a restraining influence upon the price of both of these better brands. Finally, the recognized superiority of these 11-cent loaves may deter sellers from asking more than 10 cents for the other brands, since an advance to 11 cents for the "ordinary" bread would almost certainly lead buyers to shift to the "milk" or "butter" brands.

The net effect of this intermingling of competition and monopoly is to permit some variation in the price of bread, because of the genuine differences in the several brands, but to confine this price variation within very close limits because the differences in product, while real, are after all relatively slight. Under conditions of perfect competition, with a completely uniform product, we should expect a single price to prevail, in conformity with the Law of One Price. But under imperfect competition, with a differentiation in product, price must be expected to vary somewhat. In our illustration, we have suggested that the price of bread might range from 10 to 11 cents a loaf.

Pseudo-Differences in Competing Products. Differentiation in product may be built upon pseudo-differences quite as well as on those which are genuine. The prime essential of effective differentiation is that the buying public shall *believe* that differences exist. So long as buyers are convinced that one brand is better than another, it matters not at all whether the superiority is real or imaginary. Since this is true, it is small wonder that many a seller finds it more profitable to make fictitious claims for his product than actually to endow it with superior qualities.

Let us imagine a market in which cigarettes of identical quality, but different brands, are offered for sale. Anxious to gain an advantage in the matter of price or hoping to attract an exceedingly large number of buyers, one of these producers may undertake to differentiate between his cigarettes and those of other manufacturers through the use of a clever slogan, paid testimonials of socially prominent persons, or some such device as the once flaunted "cigarette blindfold test."

If these measures are successful in persuading the public that this particular brand is better than other cigarettes which are actually equally good, this purely *imaginary* difference is likely to result in price variations within a limited range, just as in the case of the *genuine* differences in quality which led to small variations in the price of bread. Of course, it is probable that this one producer's attempt to differentiate between his brand and other brands would cause the other manufacturers to adopt defensive or retaliatory measures, with the net result that none would long hold an appreciable advantage.

The Prevalence of Differentiation in Product. Differentiation in prod-

uct that is based upon fact or fancy is discernible on every hand. Cold cream, gasoline, cornflakes, soap, milk, cigars, hosiery, and a host of other commodities are often sold under conditions of imperfect competition. The situation prevails largely because some sellers make special claims for particular brands, and some buyers, unable to check adequately on the truth or falsity of these claims, are willing to pay slightly more for a highly extolled brand of a given good than is charged for other, less highly advertised brands, which may be quite as good—and may, indeed, be even better, for price is a very uncertain index of quality. One need but compare the wild claims made for certain brands of toothpaste, with the medical profession's dictum that "the dentifrice has in itself no chemical or magical power to clean,"⁶ to see the lengths to which baseless differentiation of product in a given field may go.

DIFFERENTIATION IN CONDITIONS OF SALE

There may be differentiation in the conditions surrounding the sale of a product quite as well as in the product itself; and, of course, both kinds of differentiation may occur at the same time. However, in order to simplify our discussion of differentiation in the conditions of sale, we shall assume, in the present section, that there are no differences, real or imaginary, in the product. This leaves us free to center our attention upon any special conditions connected with the merchandising of a good, that may place one or more sellers in a preferred position, and thus make the market situation one of imperfect competition—for it must be remembered that competition is not perfect unless buyers are as willing to buy from any one seller as from any other, and are able to shift readily from seller to seller.

In most cases, the special marketing advantages that we shall note relate to all or at least many of the commodities the "preferred" seller is offering, and not merely to an isolated item. If, for example, people are willing to pay a great department store a little more than is charged elsewhere for a given good, *for reasons other than a differentiation in product*, it seems likely that they would also pay the favored store somewhat more than the customary market price for any of many kinds of goods. We shall examine several differences in the conditions of sale that might give rise to imperfect competition.

Differences in Locations. A fairly obvious marketing advantage is the possession of a specially good location, which means a location that shields the seller, to some extent, from competition. The suburban druggist often enjoys an advantage of this kind. If he has the only drug business in town, he is able to charge more than a strictly competitive price, just so long as his "mark up" is not so great as to invite competition from

⁶ *Hygeia*, October, 1926.

the outside, to induce his customers to shift to another druggist in an adjacent town, or commuters to patronize a cut-rate chain drugstore in the nearby city. Within reasonable limits, then, the local druggist, grocer, plumber, or hairdresser may charge prices that have in them some element of monopoly attributable to his sheltered business location.

In like manner, every seller whose location is so convenient that the buying public is anxious to patronize him, may use this advantage either to raise prices above those charged by less admirably located merchants, or (by keeping prices down to the customary figures) to attract an unusual volume of business. In a great city, the heart of the theatrical section, or the block nearest the suburban railway station, might, for purposes of differentiation, be an especially desirable location for the sale of specific commodities. Even if the slogan, "I'd walk a mile for a Camel," is to be taken literally, it seems more than likely that at least some of the fastidious smokers of "Camels" would pay an extra penny, or even a nickel, to be spared making the trip. Whenever differentiation in location leads to an extra payment for cigarettes, or for any commodity or service, we have an instance of imperfect competition.

Differences in Sales Policies. When, a good many years ago, a few progressive American merchants adopted the novel policy of charging established prices for goods (instead of "higgling" about price with every customer) and guaranteeing "satisfaction or money back," they placed themselves in a preferred position in the field of marketing. The acceptance of mail and telephone orders, the provision of free, prompt delivery, and the extension of liberal credit to retail buyers, were further steps in differentiation as between sellers.

The principle that "the customer is always right" has gone far, and is now widespread in this country. However, it is more earnestly observed by some sellers than by others, and herein lies a differentiation worth noting, and one that is not overlooked by the buying public. For customers who value their time and seek to avoid fruitless controversy, it is distinctly advantageous to deal with merchants who insist that the sale is not concluded until the buyer is completely satisfied. Good will, which often brings a fancy price when a business changes hands, is very largely a matter of commanding a "following" which has been built upon an enlightened sales policy.

Differentiation Through Special "Services." Another means of differentiation is the provision of special "services," which make one place of business more attractive than others of the same general type. A department store that offers its customers comfortable restrooms of ample size, writing rooms with free stationery, restaurants and lunchrooms with meals at markedly low prices, free organ concerts, free lectures on diet, poetry, and interior decorating, free instruction in cooking and dressmaking, spacious aisles, prompt elevator service, and unusually well-informed and

courteous salesmanship, is likely to be able, because of these exceptional services, to ask and receive prices somewhat higher than those charged in lesser establishments. Indeed, in the case of a great department store, the mere fact that one may do a whole day's shopping under a single roof is in itself a tremendous drawing card for many buyers.

What we have just said is, after all, little more than a variation on the old theme that when one buys a commodity he also buys service. Sometimes—as, for example, when buying a lunch or a dinner—the service is of paramount importance. But in the case of most purchases, the extension of some unusual courtesy or privilege, perhaps small and seemingly insignificant in itself, may make a steady customer of a casual buyer. In general, people like to buy in stores that are conveniently located, from concerns they feel they can trust, in physical surroundings that are pleasant, and with the help of salespeople who reject the famous Vanderbilt pronouncement, “The public be damned.”⁷

Differentiation Through Advertising. We have already noted that differentiation may result from advertising that plays up imaginary differences in equally good brands of a given commodity, and succeeds in convincing the public that one brand is superior to the rest. But advertising, without going so far as to state or even imply that a particular brand is better, may yet bring about differentiation merely by keeping the brand in question ever in the public eye.

For many years, a toilet soap of English make enjoyed an unusual popularity, which was gained largely through bombarding the public with the line, “Use Pears’ Soap!” Here was no attempt to argue the special merits of the product, but a simple injunction that attacked the possible purchaser from every magazine, newspaper, and billboard. That Pears’ Soap long occupied a sheltered position, freed from the operation of perfect competition, was perfectly apparent. That the differentiation was related to advertising is evident from the fact that the sale of this soap began to decline alarmingly just as soon as the volume of advertising was reduced, and picked up again when extensive advertising was resumed.

It is not too much to say that the *purpose* of most advertising is to differentiate between the advertised article and other very similar products, and that in any event the *effect* of extensive advertising is to interfere with the perfect functioning of competition, and thus to bring into existence a condition of imperfect competition.

Price Determination Under Imperfect Competition

Thus far, we have looked into the nature of differentiation, and emphasized the fact that it is the stuff that imperfect competition is made of. We have seen that imperfect competition gives rise to variations in price which would not occur in a perfectly competitive market.

⁷ John Bartlett, *Familiar Quotations*, Boston, Little, Brown & Company, 1938, p. 946.

Short-Run Price Under Imperfect Competition. These variations are not, in the short run, caused by differences in the costs of production, for such costs do not determine short-run price under imperfect competition any more than they do under perfect competition. These price differentials are wholly the result of differentiation in product or in the conditions of sale; and they tend to be held within narrow limits by the possibility of substitution, which is always a source of worry to the sellers of differentiated products. Even the most favored seller may, under imperfect competition, hesitate to charge as much as he might like to ask, fearing that to do so would cause some of his customers to turn to a slightly less desired product offered by others at somewhat lower prices. A variation in the price charged by different dealers for a substantially uniform product is a sign of imperfect competition, but a variation that is slight suggests that there is in the situation a good deal of potential competition, and that the preferred sellers dare not tempt the fates too far.

Long-Run Price Under Imperfect Competition. Upon long-run as well as short-run price determination, imperfect competition casts its shadow of indefiniteness. For in so far as differentiation of a product or of conditions surrounding its sale continues over long periods of time, to this extent will long-run price tend to fall within a limited price range rather than to equal an exact figure which measures the average unit costs of production.

Time has ever been a great leveler, and economists, in using the concept of long run, have depended upon the passage of years to wipe out any "abnormal" conditions which might temporarily have permitted price to be higher than the costs of production. However, they have looked to *perfect* competition to bring about the necessary readjustments; and if imperfect competition, through the agency of differentiation, is a continuing phenomenon, it would seem that the *limited price range*, rather than *one price only*, might be applicable to a good many price situations. Some kinds of differentiation are, indeed, short-lived, but others (such, for example, as differentiation based on good will or a well-advertised brand) may be potent for some decades or even generations.

Price in the Period of Current Production Under Imperfect Competition

In discussing short-run and long-run price under conditions of imperfect competition, we did not employ supply and demand curves, because we were then dealing with a product which was not completely uniform. In analyzing the period of current production under imperfect competition, we shall assume that we have isolated the supply and demand conditions relating to a given differentiated brand, and are able to picture these conditions in the form of curves. For the sake of ready comparison with situations already described, we shall employ the ATC and MC curves

that we used in our earlier treatment of the individual firm in Figs. 21 and 27.

Fig. 31, then, shows the cost conditions for a particular make of brief case, which, though not differing widely from brands offered by other manufacturers, is nevertheless preferred by some buyers who are willing to pay a slight premium for this differentiated brand. The demand for this brand is shown in the AR (demand) curve. The bargaining position of this firm is, within its own small field of differentiation, virtually that of a complete monopolist. Hence, this firm will base current production upon an examination of the intersection of the MR and MC curves. In our figure, this quantity is seven units, on which, by reason of differentiation, this manufacturer would make a monopoly profit of approximately \$21.00.

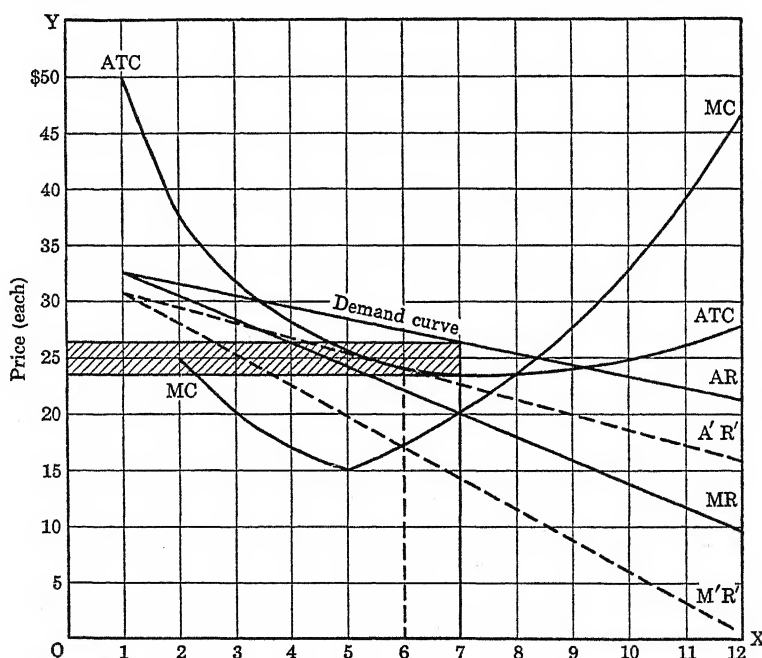


FIG. 31. COST AND REVENUE CURVES OF A MANUFACTURER OF BRIEF CASES, UNDER CONDITIONS OF IMPERFECT COMPETITION

However, the producer of a differentiated brand does not occupy a very secure position. Whatever advantage he enjoys consists of but a slight superiority, real or imaginary, of his product as compared with the products of other producers in the same field. He must keep buyers convinced of the superiority of his brand, or they will change to a similar but slightly cheaper brand. Failure to maintain the differentiation between his brand and other brands would result in a shift of the demand

curve to the left. For example, our individual firm might find itself, in a given period of current production, facing a demand curve such as the broken line $A'R'$, which is tangent to the ATC curve. The producer's guide to most advantageous production would then be the intersection of the $M'R'$ and MC curves. The broken line which passes through this point of intersection, and is perpendicular to the base line, meets the ATC curve at its point of tangency with the $A'R'$ curve. At this point, average revenue and average total costs are equal, so that there is now no monopoly profit.

In the period of current production, the individual firm will produce the quantity indicated on his marginal cost curve for any price, so long as the price is higher than the average variable costs of production. Ordinarily, the producer of a differentiated brand will, in the period of current production, be able to command a somewhat higher price than would be available if the situation were perfectly competitive, but a price somewhat lower than would be his under complete monopoly.

What we have said in the present chapter does not destroy, or seriously weaken, the price theory that we have been expounding in the past four chapters. It is, after all, little more than an amplification of our repeated warning that perfect competition and complete monopoly are extremely rare. It is true that in three of these four chapters we have assumed the existence of perfect competition or complete monopoly. These assumptions were essential to the development of our analysis, just as certain hypotheses are necessary in the study of the physical sciences. But we have been free always to admit that competition and monopoly in unmodified form are probably non-existent. "Though monopoly and free competition are ideally wide apart," says Professor Marshall, "yet in practice they shade into one another by imperceptible degrees; . . . there is an element of monopoly in nearly all competitive business; and . . . nearly all the monopolies, that are of any practical importance in the present age, hold much of their power by an uncertain tenure; so that they would lose it ere long, if they ignored the possibilities of competition, direct or indirect."⁸

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1. What is the meaning of "partial monopoly"?
 2. In what respect does short-run price under partial monopoly differ from short-run price under complete monopoly?
 3. It is suggested in the text that partial monopolists usually find it desirable to "practice forbearance." Explain.
 4. Describe "the quandary in which the partial monopolist [in contrast to the complete monopolist] finds himself in the period of current production."

⁸ Alfred Marshall, *Industry and Trade*. New York, The Macmillan Company, 1923, p. 397.

5. The term "strictly competitive price" assumes that the good under consideration is uniform throughout the market. Why is this assumption essential?
6. In what respects might a merchant gain through a "differentiation" in the product he sells?
7. "The outstanding characteristic of imperfect competition is differentiation." Explain.
8. Give an example of *genuine* differences in *competing* products.
9. Differentiation in product may be the result of pseudo-differences. Explain, with an example.
10. In every instance of imperfect competition, there is an element of monopoly. Why is this necessarily the case?
11. Under imperfect competition, prices must be expected to vary somewhat. What is to keep them from varying *widely*?
12. What connection, if any, is there between (a) differentiation in product and (b) lack of knowledge of market conditions on the part of the buyers?
13. Explain how a progressive sales policy might lead to differentiation, and therefore to imperfect competition.
14. Give an example of differentiation brought about by advertising.
15. Contrast the *price range* under imperfect competition, with *one price only* under perfect competition.
16. Why should the quantity sold, as well as price, be somewhat indefinite under imperfect competition?
17. Would you expect differentiation to be wiped out in the long run? Why, or why not?
18. In the period of current production "the producer of a differentiated brand does not occupy a very secure position." What is the nature of the advantage he enjoys because of differentiation, and why is his hold on this advantage not very secure?
19. What is the gist of Professor Marshall's observation on the nature of competition and monopoly?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 12.

The Operation of the Price System

IN OUR DISCUSSION OF INDIVIDUAL PRICES, WE HAVE CONSIDERED USUALLY A single economic good, or a single grade of an economic good, at a time. Our purpose has been simplicity of treatment. But in actual practice it cannot be said that the demand for and supply of a given economic good are independent of the demand for and supply of other economic goods, or that the price of a given good is unrelated to the prices of other goods. On the contrary, the demand and supply conditions of different economic goods, and the prices of these goods, are highly interrelated and interdependent; and the interaction of the many individual prices in the price system has consequences, at least in a capitalistic economic system, which are of great interest and importance to the student of economics.

Every economic system is faced with the basic problem of satisfying great and growing human wants by utilizing certain scarce means of production which have alternative uses. In this situation, some way must be found to determine (1) the apportionment of existing limited quantities of consumable goods among the members of society; (2) the kinds and quantities of economic goods to be produced; (3) the allocation of the limited quantities of the productive agents among the various industries and fields of production; and (4) the total quantities of reproducible agents of production to be made available in the long run. While these decisions may be made in other ways in other types of economic systems, under capitalism they are usually made by enterprisers *on the basis of price relationships*. The part played by the price system in reaching these fundamental decisions is so important that many economists consider the money and price system the most significant single institution of a capitalistic economic order.

THE FUNCTIONS OF THE PRICE SYSTEM

The Apportionment of Existing Economic Goods. We shall now examine in some detail the functions performed in our economic order on the basis of the price system and price relationships. In the first place, prices determine who shall have access to existing stocks of economic goods, and how these goods shall be apportioned. Sometimes the problem is one of restricting purchases of a good to a quantity which can be satis-

fied by the existing limited stock. In other cases, the difficulty is to find enough purchasers to take the large existing stock of a good from the market. If, for example, the available quantity of butter is unusually small, a rising price induces some people to give up this commodity altogether, and others to restrict their purchases to smaller quantities than usual. In this way the market demand for butter is kept from outrunning the market supply. And if an unusually large quantity of (say) strawberries is available on the market, a falling price attracts new customers and induces others to buy larger amounts than usual, so that market supply does not outrun market demand.

This need for a device to apportion existing stocks of economic goods among consumers is a characteristic of our modern complicated economic system. When each individual or family was economically self-sufficient, producing a considerable variety of goods on a small scale by fairly direct methods, the same persons were both producers and consumers and the problem of apportionment did not exist or was relatively unimportant. Under modern conditions, however, one set of individuals specializes in producing a certain article, turning it out in large quantities by indirect methods, and a second set of individuals—largely or entirely separate from the first—consumes the article. Under such conditions, the problem of adjusting consumers' demands to the existing quantities of goods becomes one of the utmost significance.

The leading alternative to the apportionment of consumable economic goods through price adjustments is apportionment by means of quantity adjustments. That is, in a given economic system, the government or an agency of the government may keep the price of a good stable and low, regardless of whether the quantity available is large or small, and may increase or decrease the quantity each individual or family is allowed to purchase in a week or some other period of time. Rationing of this kind has the advantage of insuring that each individual or family shall get at least a small amount of a given good, and it is most likely to be used in wartime or in other emergency situations when the available quantities of certain finished economic goods are unusually limited.¹

The Control of Production. In a capitalistic system which depends upon specialized, indirect, and large-scale production, another problem is to get producers to provide the commodities and services desired by consumers, and in the proper relative quantities. In a non-specialized system, in which each individual or family was practically self-sufficient from an economic point of view, this problem would not be very troublesome. For the same individuals would function as both producers and consumers, and should be able, before engaging in production, to decide what they wanted to consume. In our type of economy, the adaptation of

¹ Some of the experiences of the United States with rationing by physical quantities during World War II are described in chap. 30.

production to the needs and desires of consumers is accomplished by means of the price system.

In our economic system, consumers indicate the relative intensity of their desires for various kinds of economic goods by their willingness to pay high or low prices. If the quantity of a commodity is small, as compared with the demand for it, the price of the good is likely to be higher than the cost of production. Business enterprisers are interested in making profits, and are consequently always on the lookout for opportunities to turn out goods which will sell at a profit. Hence, they are attracted to industries which produce such goods. Large profits cause new enterprisers to enter the field, and old enterprisers to expand output and eventually their productive capacity. A favorable price for a product makes it possible for the enterprisers in that field to bid effectively for the necessary agents of production, and attract large quantities of these agents to the industry. The final result is that production expands, and the demands of consumers for the product in question are satisfied more fully than formerly.

The opposite is true when a commodity is being produced in relatively large quantities, so that the price is lower than the costs of production. Enterprisers who are looking for profitable businesses are repelled by the unfavorable price. Some enterprisers who are already in the industry are likely to be driven out, and those who continue are likely to cut down their rate of production and eventually decrease their capacity for production. The industry is unlikely to attract new agents of production, and on the contrary probably loses some of the agents formerly employed. The final result is that output decreases until the quantity produced finds buyers at a price that is reasonably satisfactory to the producers. Thus the prices of finished goods, and the prices of productive agents used in making them, aid enterprisers in deciding what kinds and quantities of economic goods to produce.

Production Control in Wartime. Theoretically, the expansion and contraction of various industries, and the conversion and reconversion of productive facilities, could be allowed to depend upon cost-price relationships even in wartime. For example, the government might undertake to pay such high and profitable prices for airplanes that existing airplane factories would run at full capacity, automobile producers would voluntarily curtail or stop the production of automobiles and convert their facilities to the production of airplanes, and new firms would be induced to enter the field of airplane production. Similarly, the industries engaged in war production might attract the necessary workers by paying wages much higher than the workers could obtain in industries producing civilian goods, and so on.

However, in practice the government is likely in wartime to resort to direct control over production, and over the extension and conversion of productive facilities. The reason is not that wartime problems are unusual

in *nature*, but rather that they are unusual in *scope* and *urgency*. In peacetime, the conversion and extension of productive facilities occur gradually, and only a small number of industries may be seriously affected at any one time. In wartime, the conversion and extension of productive facilities are needed immediately, and most, if not all, industries are affected to some extent.

Moreover, if the banks are creating a considerable part of the funds necessary to finance the government's war expenditures (by buying government bonds and paying for them by creating demand deposits for the government), reliance on price relationships to induce the extension and conversion of productive facilities may be ineffective and costly. That is, if the government spends much more for war than it takes out of the current incomes of the people through taxes and direct sales of bonds, the willingness and ability of the government to pay high prices for airplanes or other war goods may be offset to a considerable extent by the willingness and ability of private individuals to pay high prices for automobiles or other civilian goods. In such a situation, the extension and conversion of productive facilities may not go forward as desired, and the money cost of the war may be greatly increased as prices rise because of the competitive bidding of government and people for war goods and civilian goods, respectively. When agents of production are fully employed, competitive bidding for their services may result in serious inflation. Hence, in wartime a government is likely to control prices directly and to regulate production through official boards or other agencies.

Soon after the United States entered World War II, the task of speeding and guiding the output of necessary goods was assigned to the War Production Board, which was created by two Executive Orders issued by the President of the United States. The War Production Board was authorized (1) to exercise general direction over the war procurement and production program, and (2) to determine the policies, plans, procedures, and methods of the several federal departments, establishments, and agencies with respect to war procurement and production, including purchasing, specifications, and construction, and including conversion, requisitioning, plant expansion, and the financing thereof; and to issue such directions with respect thereto as might be deemed necessary or appropriate. The Board established a number of regional offices, located in large cities from coast to coast, to facilitate the handling of local and regional problems.

The powers of the Board were, of course, very great. It could order industries producing civilian goods to curtail production or even stop operating altogether, and it could permit them to resume operation when needs for war production moderated to some extent. It could take almost any necessary steps to insure the adequate production of essential war goods. Conversion and extension of plant facilities could be undertaken only with the approval of the Board, and the Board controlled the alloca-

tion of vital materials and capital goods among firms and industries. With the coming of peace, its regulations and controls were rapidly relaxed, for the existence and functioning of such an agency in peacetime would be quite foreign to the nature of a capitalistic economic system.²

The Apportionment of Productive Agents. As the explanation of the control of production by means of cost-price relationships suggests, the price system does more than control the output of finished goods. The prices which producers are willing to pay for the agents of production furnish the basis for distributing existing quantities of the scarce agents among various industries under capitalism. Consider land, for example. Owners of land are likely to consider carefully the several uses to which their land might be put and the rents that would be paid by the various enterprisers who are willing to lease it. When landowners entrust their land to the enterprisers who offer the most favorable terms, they are apportioning the existing quantity of this scarce agent of production among the various industries, and thus are encouraging the production of certain economic goods rather than others.

The available quantity of capital is distributed in a similar fashion. Capital results from saving, and savings are dependent upon the existence of incomes larger than are required for current consumption. Savings are sometimes invested directly by the savers themselves, but more often that responsibility is transferred to other persons or institutions. In any case, those who have savings usually seek investments which will bring the highest rates of return, after making allowance for variations in risk as between industries. By the act of turning savings over to certain industries, the investors make it possible for these, rather than others, to acquire needed supplies of capital goods. In this way, the quantity of capital available for production is apportioned among the various industries, and certain types of production are encouraged while others are discouraged.

Even labor, the human agent in production, is distributed among the various industries of our economy largely on the basis of the relative prices offered for it. While a high or low wage is not the only influence that leads workers to prefer one occupation to another, differential earnings remain the most important single factor in bringing about these decisions. Other things being equal, workers are attracted by high and repelled by low wages. The volume of labor in a declining industry falls off as the workers are asked to accept lower wages than formerly, or as it becomes evident that the children of these workers will be poorly paid if they follow their fathers' occupation. But a new and expanding industry can attract a considerable part of the existing labor supply because it is able to pay higher wages than workers could command in industries that are less favorably situated.

² The governmental price control which accompanied the control of production during World War II is discussed in chap. 36 (vol. 2).

The competitive bids of enterprisers for the agents of production tend to set high prices on the relatively scarce agents and low prices on the more plentiful agents, encouraging a smaller use of the former and the fuller employment of the latter. A low price for a relatively scarce agent would lead to its waste in trivial uses, but a high price reserves it for more important employments. A high price for a relatively plentiful agent would cause enterprisers to economize in its use, and many units of the agent would remain idle; but a sufficiently low price tends to put all units of the agent to work, in the long run.

The Apportionment of Productive Agents in Wartime. In wartime, the government is likely to resort to direct control over the apportionment of productive agents among industries and businesses, in order to achieve the exact allocation deemed most appropriate for the effective prosecution of the war and to prevent an undue bidding up of the prices of the agents after full employment has been reached. For example, the allocation of vital materials among firms and industries in the United States during World War II was made on the basis of the so-called Controlled Materials Plan. Prime contractors all over the country were required to assemble bills of materials needed, specifying kinds, quantities, and the times at which needed. These bills of materials were submitted to seven claimant agencies: Army, Navy, Maritime Commission, Aircraft Scheduling Unit, Board of Economic Warfare, Lend-Lease Administration, and Office of Civilian Supply.

The claimant agencies combined the bills of materials sent in by their contractors and submitted them to the War Production Board, which matched total requirements of the claimant agencies with available supplies of materials, making allowances to these various agencies according to their importance. The claimant agencies followed their own preferences in distributing their allotments to the prime contractors, who in turn rationed the materials to subcontractors. The allotments to contractors amounted to "certified checks" for specific quantities of materials in specific periods of time. Finally, the War Production Board had to inform the producers of the materials what kinds and amounts of materials to produce in order to meet the allocated demand in each period. Such a method of apportioning scarce productive agents among industries and businesses differs sharply from the usual process, which depends upon prices and competitive bidding.³

Controlling Total Quantities of Productive Agents. Finally, it is true that price relationships control, where possible, the total amounts of the agents of production which will be in existence in the long run. That is to say, a high rate of remuneration for an agent of production encourages

³ Governmental controls over the allocation of labor among industries and businesses in wartime, as well as other governmental controls affecting labor, are discussed in chaps. 21, 24, 25, and 26.

an increase in its quantity, whereas a low payment leads to a decrease. However, it is not always possible to create more of an agent of production. In the case of land, for example, it is clear that rents and land prices may go up indefinitely without bringing about any increase in the quantity of this natural wealth.

In the case of labor, a theory held by classical economists, such as Malthus and Ricardo, suggested that the total quantity of labor was directly related to changes in wage rates. According to this theory, unusually high wages for labor would cause workers to have more children and enable them to rear large families to maturity, until these increases in the quantity of labor eventually caused wages to fall to, or perhaps even below, the subsistence level. If wages fell below the subsistence level, workers would have fewer children, or the disease and malnutrition that often accompany low standards of living would prevent the children from reaching maturity; the final effect would be a decrease in the total quantity of labor and a rise in wages to at least the subsistence level. The long-run result of these two tendencies would be to keep the wages of workers hovering around a level at which workers could only just maintain and replace themselves.

In modern times, this theory has been quite largely discredited. Indeed, some people hold to a theory which is almost the opposite, insisting that, if wages are raised, and workers become accustomed to higher standards of living, they will fight to retain these higher standards, even to the point of delaying marriage and practicing family limitation. Also, the necessity of getting along on the low standard of living that accompanies low wages is said to make workers imprudent, improvident, and careless of the morrow, so that they increase unduly the size of their families, and the future labor supply. In general, however, it seems that wage rates are less effective in controlling the total quantity of labor in the long run than in distributing the existing labor supply throughout our economy.

Capital goods result from saving and investment, and both of these processes are fairly responsive to changes in the rate of return which is obtainable. Saving, of course, is done by many different kinds of people and in response to a variety of motives. Many people would save against a possible rainy day, even if there were no such thing as interest. Some have such large incomes that they can save easily since they feel no urge to spend all that they receive year by year. Some savings are apparently made from force of habit, but others result wholly from the desire to provide for consumption at a future time, and thus are not greatly influenced by the prevailing rate of interest.

Despite considerations such as these, the fact remains that much of the saving which takes place is made only because of the financial incentive in the form of interest. All saving requires the postponement of consumption. Some families have such small incomes that it would involve con-

siderable sacrifice to save even a very small amount. And those persons who would save something even if no interest were obtainable can be induced to save more only by offering them interest; for the greater the amount saved out of a given income the greater is the pressure on the individual to spend the rest of his income for present consumption. It follows that a high rate of interest will sooner or later tend to call forth a larger total volume of savings than a lower rate, and that a reduction in the interest rate will tend eventually to cut down the total volume of savings. However, the effects of changes in interest rates upon the volume of savings are somewhat slow and uncertain. For in times of business depression and low interest rates, savings often continue to be made in considerable volume, while in prosperous times the total volume of investment in old and new enterprises often outruns the total volume of savings.

Investment is controlled more directly than saving by the rates of return that are obtainable. By investment we mean the use of savings for the purchase of capital for developing new industries or expanding old ones. The investments may be made directly by the savers themselves or by those who make a business of providing business men with funds. When business is good and old investments command high rates of return, new commitments are made with alacrity and enthusiasm, even though the necessary postponement of consumption will mean considerable sacrifice, or the funds must be secured from others at considerable expense. Indeed, our commercial banks themselves often create purchasing power at such times so that additional investment may take place at a faster rate than would be possible if only new savings were used. When business is poor and old investments are paying unsatisfactory returns, people hesitate to make additional investments even though savings are available at low rates, and much of the existing volume of savings may be forced to lie idle until business conditions improve.

It appears, then, that the price system, by controlling the processes of saving and investment, provides a means of handling a problem which must be handled in some way in every economic order. The problem is that of deciding how our national income shall be divided as between the satisfaction of present wants through consumption, and the provision of facilities for obtaining a greater variety and abundance of economic goods in the future.

Theoretical Outcome of a Perfectly Functioning Price System. The results which we should expect to be attained if our economic system operated perfectly on the basis of price relationships may be summarized briefly. The members of society, as producers, would turn out precisely those goods which the members of society as consumers desired, and the relative quantities of the various items produced would be perfectly adjusted to the demands of consumers for them. The production of each economic good would be carried to the point where the last unit produced

would command a price sufficient, and only just sufficient, to cover the cost and effort of producing it; at the same time, the consumption of each economic good would be carried to the point where the last unit purchased could be expected to produce a degree of satisfaction sufficient, and only just sufficient, to justify the payment of the price exacted for it.

Since, at this margin of production and consumption, both the anticipated satisfaction on the one hand and the cost or effort on the other would be equal to the same thing—that is, to the price of the good—they would presumably be equal to each other. However, since the units of the good which were produced up to this point of equilibrium could reasonably be expected to give more satisfaction than the marginal unit and to cost less than this unit, ideally the industry which produced the good in question—and, in like manner, *all* industries—would control production so as to furnish society with the greatest possible surplus of utility over disutility (as represented by efforts or costs).

If the agents of production were allocated among firms and industries strictly on the basis of prices, their employment, under ideal conditions, would be perfectly coordinated with the desires of consumers as expressed on the market. No unit of any productive agent would be used for the production of a particular economic good if its use in producing some other economic good would result in a greater value-product or a higher rate of remuneration for the owner of the agent. Because of the apportionment of usable commodities and services among consumers on the basis of prices, no unit of any economic good would be purchased and consumed by any one individual if a greater marginal utility would result from its purchase and consumption by someone else, so far as marginal utilities are accurately measured by the willingness of individuals to pay prices on the market. Finally, the productive resources of the economy would be divided between providing for the present (through the production of finished commodities and services) and providing for the future (through capital formation) in perfect accordance with the time preference and desires of the people. In summary, the operation of the economy on the basis of the price system should make our scarce resources of production go as far as they could possibly be made to go toward the complete satisfaction of human wants.

CRITICISMS OF THE PRICE SYSTEM

Criticisms of the actual operation of our economic system on the basis of price relationships usually embody two points of view. First, our actual economic system operates, on the basis of prices, with much less efficiency than does a theoretical model of capitalism. Second, even if the economy operated with perfect efficiency on a price basis, the result would not be the maximum satisfaction of human wants. The basis of this second

criticism is the fact that money prices are imperfect instruments for measuring and expressing the relative strength of various human needs and desires and the costs of satisfying them. We shall turn first to criticisms of the efficiency of the price system.

The Apportionment of Finished Goods. Finished commodities and services must be apportioned among consumers by some method or other, and it is fair to say that apportionment by means of price movements has proved a reasonably efficient method. The price of a good can always be made so high that the existing quantity, however small, will find—and only just find—takers. Similarly, a price can be made so low that enough buyers will be found to take off the market any conceivable quantity of a good. The amount by which price must change, to bring market demand and market supply into equilibrium, varies greatly from one good to another. If the demand is inelastic, the price has to rise greatly if it is to reduce the purchases of the good even slightly, and a great drop in price is necessary to induce buyers to take much more of the good than usual. If, on the other hand, the demand for an article is elastic, and the quantity available is much smaller than usual, a slight increase in price has the effect of discouraging many buyers; and if the quantity to be sold is larger than usual, a slight decline in price may be counted upon to increase sales greatly.

In actual practice, the apportionment of economic goods among consumers through price changes seems to work better in one direction than in the other. Rising prices are very effective in holding purchases down to a total which can be satisfied from existing stocks of economic goods, for sellers are glad to make this type of price adjustment whenever possible. But sometimes large stocks of goods pile up in the hands of producers and sellers, apparently unable to find a market. The reason, and the only reason, is that sellers are unwilling to lower their prices sufficiently to induce purchasers to take the goods off the market—because the sellers are unwilling to take a loss on the sale of their goods, are afraid of spoiling the market later on by selling at unusually low prices at present, or prefer to take their loss in some other form. Difficulties of this kind occur, then, not because apportionment by means of price changes is incapable of working effectively, but because producers and sellers are at times unwilling to let it work.

The Control of Production. Though there can be no doubt that the activities of business enterprisers in production are influenced by cost-price relationships, we must not expect to find production perfectly adapted to these relationships in practice. For one thing, the relative immobility of the agents of production obviously has an important effect upon the success with which production can be controlled on the basis of price relationships. Favorable or unfavorable cost-price relationships do afford a stimulus to the expansion or contraction of the production of specific

types of economic goods; but adjustments of production to changes in demand cannot be brought about quickly and smoothly, because of the inability of the productive agents to move readily from one place or occupation to another. And, all too often, before an adjustment of production to one change in demand can be completed, another change in demand may occur which will render the attempted adjustment of production inappropriate.

The market conditions which prevail on the supply side of price determination are also important. It is only under competition that the enterprisers in any given industry, in reacting to increased demand and favorable prices, may be expected to expand production so extensively that the price of the product will necessarily fall back to the cost of production level. In controlling the affairs of their enterprises, monopolists and monopolistic competitors must pay attention to the demand for their products; but under any given condition of demand they have no incentive to carry production to the point at which they can obtain prices which will merely cover the average cost of production per unit of their goods. Instead, they tend to limit output to the volume at which the marginal cost of producing the good is equal to the marginal revenue derived from its sale. Since such an output is ordinarily well short of that at which the price would be equal to the average cost of production, it follows that the productive results of operation under conditions of monopoly or monopolistic competition are quite different from those assumed in the general description of the control of production on the basis of price relationships.

Moreover, under conditions of monopolistic competition, products are differentiated and the individual enterpriser is in a position to control the market for his product to some extent. In such a situation, the enterpriser may decide that it will be better for him to try to "educate" the consumers to want and pay for the kind and amount of the good he considers it desirable to produce than to try to adjust his production to the supposed wants of consumers. The simple theoretical discussion of the control of production on the basis of price relationships tends to overlook the whole range of advertising and other economic activities which have as their purpose, at least in part, a change in the pattern of human wants rather than the satisfaction of wants which already exist.

The Apportionment of Productive Agents. Not only is production itself never perfectly adjusted to price relationships, but the same thing is true of the apportionment of productive agents among industries and businesses. Once land has been committed to a particular enterprise or industry, it is ordinarily tied up for a considerable period of time and cannot be shifted promptly to other enterprises or industries, even though more profitable opportunities for its employment should arise. In similar fashion, when capital funds have actually been invested in fixed plant and equipment in some industry or other, and these capital goods will last for

years, a change in price relationships which would make it possible for these funds to earn a greater return in some other type of investment will not cause them to move at once to another industry. Hence, for relatively short periods of time, a large part of the economy's capital funds is likely to be immobile, and, as a consequence, the distribution of funds among industries is unlikely to be perfectly suited to the price relationships which exist at a given time.

However, it remains true that, in the long run, all capital funds are mobile and none are permanently tied up in fixed capital goods. If savings will command more net interest in some uses than in others, or in some places than in others, after variations in risk and costs of administration are allowed for, it is to be expected that, in general, savings will move in the long run from occupations or places where net interest is low to occupations or places where it is high. That is to say, as capital goods wear out and make available liquid funds which might be used for their replacement, these funds will, if better investments are available, be transferred to other uses or places instead of being reinvested in new capital goods of the original type.

Differences and changes in wages are, even in the long run, sharply limited in their power to distribute labor among the many industries and occupations of a country. In some instances, workers may continue to accept a given wage, even though a higher one is being paid in another industry or area, because they are not aware of these better opportunities or because their acceptance of them is prevented by powerful unions. In other cases, they may know of the higher wage rates to be obtained in other occupations and be qualified for these jobs, but be unable or unwilling to take them because the better-paying jobs are beyond a reasonable commuting distance. The workers may be unable to pay the cost of moving themselves and their families to another place, they may have formed an attachment for their present location, they may have children in school whose opportunities for education would suffer in the new community, or they may have homes which they could not sell except at considerable loss.

Still more important is the fact that the labor supply of a country does not consist of a single great mass of homogeneous units, all of which can compete freely with one another for employment in various occupations. Instead, the labor supply is divided into groups or classes, and the members of one group do not ordinarily compete with the members of another group. The high earnings enjoyed by investment bankers or corporation lawyers cause few, if any, hod-carriers to throw down their hods and study banking or law. They might easily lack the native ability to enter these pursuits, as well as the helpful factors of capital and social connections, and the necessary training might be difficult, if not impossible, for them to obtain. In short, a combination of hereditary and environmental factors

tends to prevent free competition among different classes of labor, except in the occupations which are open to the members of a given group or grade of labor. This matter is discussed in detail in Chapter 21.

Controlling Total Quantities of Productive Agents. The method of controlling total quantities of productive agents by means of prices applies with real force only to capital, and even here the results produced are far from perfect. The total quantity of savings and capital often adjusts itself very slowly to changes in the interest rate. In times of inactive business, saving may take place to a considerable extent, even though the rate of interest has been declining steadily and the demand for funds to invest in industry is light. On the other hand, in highly prosperous times the demand for savings for use in financing new productive facilities may outrun the total quantity of savings, even though the rate of interest rises considerably.

The Influence of Business Depressions. In general, we must conclude that our economic system never operates with complete efficiency on the basis of price relationships. However, it operates with much greater efficiency at some times than at others, and is subject to periods of prosperity and depression. At times we are faced with the tragic spectacle of countless human wants going unsatisfied while many units of the scarce productive agents lie idle and wholly unproductive. Such periodic failures to use substantial portions of our agents of production while human beings are clamoring for goods represent, of course, a great economic waste.

The subject of business cycles is discussed at length in Chapter 37 (Vol. 2), but we may suggest here that business cycles are an almost inevitable characteristic of our type of economic system—that is, a system which depends upon specialized, large-scale, and roundabout production, self-interest, freedom of enterprise, private property in the agents of production, and the operation of the competitive price system. Specialization makes the different parts of our economic system highly interdependent, so that the maladjustment or breakdown of one important industry will affect adversely most, if not all, of the others. Large-scale production emphasizes whatever mistakes are made in adjusting production to demand; and indirect production, involving as it does a tremendous investment in fixed capital goods, tends to make such mistakes relatively permanent in character.

In an economic system which maintains freedom of enterprise and gives the individual an opportunity to follow his own economic self-interest, the decisions as to what to produce, when to produce, and how much to produce are made by a large number of independent individuals. Each, within rather broad limits, is left free to produce anything he pleases, at any time, and in any quantity that seems to him desirable, without regard to the demand for his and other products or the activities of other producers. The fact that most of these decisions which relate to production

will become effective only in the fairly distant future introduces into the situation another opportunity for error. Under these conditions it would be little short of a miracle if an appropriate amount of each economic good were produced year after year; and under these conditions it is easy for industries to overdevelop and get out of adjustment with one another.

The Influence of Differences in Income. We turn now from the discussion of the imperfect functioning of our economic system on the basis of price relationships, to the contention that the system would produce imperfect results even if it operated with complete efficiency so far as price relationships are concerned. This argument rests upon the theory that money prices are not wholly satisfactory instruments for measuring and expressing human desires and the costs of satisfying them. We have said that, under the price system, the tendency is to produce each economic good down to the point where marginal efforts and satisfactions balance. This balancing of efforts and satisfactions does not mean much when the parties to the transactions are from very different income levels. Consider, for example, the case of a well-to-do person who hires a domestic servant for thirty dollars a week. The employer desires the services of a domestic and considers the satisfaction to be derived from these services to be worth the price he must pay to get them. The prospective servant is capable of producing the required services and considers it worth while to expend the necessary effort in order to obtain the wages.

In spite of these considerations, there may be no real balancing of efforts and satisfactions in this case. The value of money per unit to the well-to-do person is so small that he may spend thirty dollars a week for a very moderate amount of satisfaction. On the other hand the value of money per unit to the servant is so great that she will expend, for thirty dollars a week, an amount of effort which the rich man would not exert for a weekly stipend many times as large. Money prices cannot serve effectively as instruments for measuring efforts and satisfactions as between persons to whom the value per unit of money itself is quite different. It follows that, in our economic system, many agents of production are used for purposes for which they would not be used in an economic system in which money incomes were relatively equal.

The implications of such cases are obvious. Many efforts which now go into producing small satisfactions for the rich at high prices, instead of large satisfactions for the poor at low prices, would be transferred to the latter more important uses in an economy of equal incomes, with an increase in the surplus of total satisfactions over total efforts. This discussion, then, casts doubt upon the results obtained from the process by which consumers guide producers through the agency of prices. According to our previous analysis of this process, consumers express the high desirability or importance (to them) of certain economic goods by their willingness to pay high prices, while unimportant and non-essential goods can command only low prices. The high prices for certain goods

attract enterprisers to these lines of production, and they in turn attract the other agents of production. In this way, it is assumed that our productive agents will be concentrated in the making of the economic goods which are most desired by consumers.

However, our discussion has shown that, when individual incomes are highly unequal, a high price for a given economic good may mean either that the good is greatly desired by its consumers or that the consumers have such large incomes that they are willing to pay a high price even for a good which furnishes only a trivial satisfaction. On the other hand, a low price for a good may mean either that it is unimportant to its consumers or that the consumers have little money to spend for it or anything else, however badly the good may be needed. Business enterprisers are interested primarily in the existence of high and low prices, and not in the causes of such prices. Consequently, they are more likely to produce unimportant articles for the rich than important articles for the poor, if the production of the first is more likely to bring gains than the production of the second. On the basis of price relationships under capitalism, the production of economic goods is adjusted only to the effective demands of consumers in the market, and not to fundamental human needs or desires; for the demands of consumers, as expressed in terms of money, will not reflect human needs and desires accurately if individual incomes in the economy are highly unequal.

Underestimated, Complex, and Negative Wants. Even if all consumers had equal incomes, money prices would still not provide satisfactory expressions of all human wants and needs. In some cases, the difficulty is that consumers are likely to underestimate their real needs. It would be quite possible, we may suppose, for private enterprisers to furnish us with such services as fire protection and education on the basis of price relationships. But because of the great importance of such services from the social point of view, and because of the probable inadequacy of their production by private enterprisers on the basis of the prices which people would voluntarily pay, we take the provision of these services out of the realm of the free market and have them handled by public authority.

Some of our more complex wants seem incapable of being satisfied through the medium of the market and price mechanism. Take, for example, the matter of national defense, or the protection of our citizens from attack by external enemies. As one writer has said, "No device readily suggests itself by which such of the inhabitants of a given territory as were unwilling to subscribe to the cost of maintaining an army could be prevented from enjoying its protection in time of war; or which would adjust the amount of protection enjoyed by each citizen accurately to the amount that he chose to spend for this service."⁴ Or consider the desire for economic security, which is undoubtedly a matter of great importance

⁴ Barbara Wootton, *Lament for Economics*, New York, Farrar & Rinehart, Inc., 1938, p. 177.

to many persons. Clearly, "there is no way in which we can go into the market and, as it were, bid up the value of security, so as to stimulate the economic system to deliver more of this admirable product."⁵

Again, the price mechanism, as such, gives consumers no chance to express their negative preferences by bidding against the production and sale of certain commodities and services which they regard as undesirable. There may be many whose sum total of satisfactions would be much increased if they could prevent the publication and sale of a particular book or the production and sale of alcoholic beverages, noxious patent medicines, or other products, and who would be glad to pay prices to obtain such satisfaction of their negative preferences if an opportunity could be given them to do so. But there seems to be no way in which the price mechanism can take these negative preferences into account, and so we exercise these preferences, if at all, only through public (that is, governmental) action.

Unmeasured Costs. Finally, there is the problem of unmeasured costs. We have seen that, under competition at least, an enterpriser will ordinarily undertake to produce a good if the price he expects to obtain is sufficiently great to cover the necessary efforts of producing it, as these efforts are measured in terms of money costs. However, some of the actual costs to society of producing an economic good may escape measurement in terms of money. Suppose, for example, that a concern wants a tunnel excavated through a mountainside and signs an agreement with a contractor at a specified price. The contractor would not agree to this price unless he thought it sufficient to cover wages to workers, the cost of materials and supplies, depreciation of equipment, and the like; and the company would not agree to the price unless the service to be obtained appeared likely to warrant the expenditure. Thus, the undertaking would seem to be economically justifiable.

But the tunnel may have to be dug through solid silica, so that the workers are compelled to breathe the equivalent of finely ground glass, as in the once notorious Gauley Tunnel case. As a consequence, many workers may contract silicosis, a disease of the lungs which causes great suffering and often death to the victims. Someone has to pay for their care while they are incapacitated, and for the support of the dependents left by the early death of these workers. It is likely that society will have to bear the major part of these costs, which did not enter into the calculations of the company and the contractor when they were dickering over a price for the construction of the tunnel.

Manufacturers have sometimes decided to go into business and locate in given communities without reckoning as part of their costs, which the selling prices of their products would have to cover, the destruction of fish and pollution of the water supply which would result from

⁵ *Ibid.*, p. 202.

pouring their industrial wastes into nearby streams. Similarly, the money costs of business enterprisers may take no account of the effects which the soot, grime, and smoke emitted by their factories may have on the health of the community's citizens, or on their laundry and house-painting expenses. In all such cases it appears that goods are actually produced in our economic system which might not be produced at all if their prices had had to be sufficiently high to cover all the costs incurred by society in producing them. In other words, certain goods which are being made may not yield enough satisfaction to justify their real costs, some of which usually escape measurement in terms of money. For these and other reasons, we should not be able to say that our economy had succeeded in making the scarce means of production go as far as possible in the satisfaction of human wants, even if the economy operated with complete efficiency on the basis of money prices in the market.

THE PRICE SYSTEM AND ECONOMIC PROBLEMS

Our analysis and evaluation of the price system have suggested some of the problems which are to be considered in later chapters. Some workers, because of immobility, ignorance, or inertia, may work for wages which are below the marginal productivity of their services. Others, who may include millions of workers, although they are paid all their services are worth in the market, may yet have such low incomes that they cannot buy a decent scale of living and must endure insecurity with respect to the risks of accidents, illness, old age, and unemployment. Workers and employers, in quarreling over the proceeds of production, may bring hardship and economic loss to each other and to the general public.

Since our economic system operates with much greater efficiency at some times than at others, we must face the problem of business cycles and the closely related problem of changing price levels. Our commercial and financial relations with other countries may either be allowed to rest on a market-and-price basis or be subjected to much governmental interference. Since some human needs and desires can be satisfied only imperfectly, or not at all, on the basis of the price system, we are likely to try to satisfy them through collective action. This, however, raises the problems of what the functions of government should be, how much money should be spent on them, and how the money should be raised. Great inequality in the distribution of income among individuals and families is a natural result of operating our economy on the basis of the price system, and this inequality brings with it a number of problems.

Some industries, such as railroads and public utilities, tend naturally toward monopoly, and their unregulated operation may have serious consequences for the general public. Monopolies may also be formed in other industries and businesses, with similar implications for the general

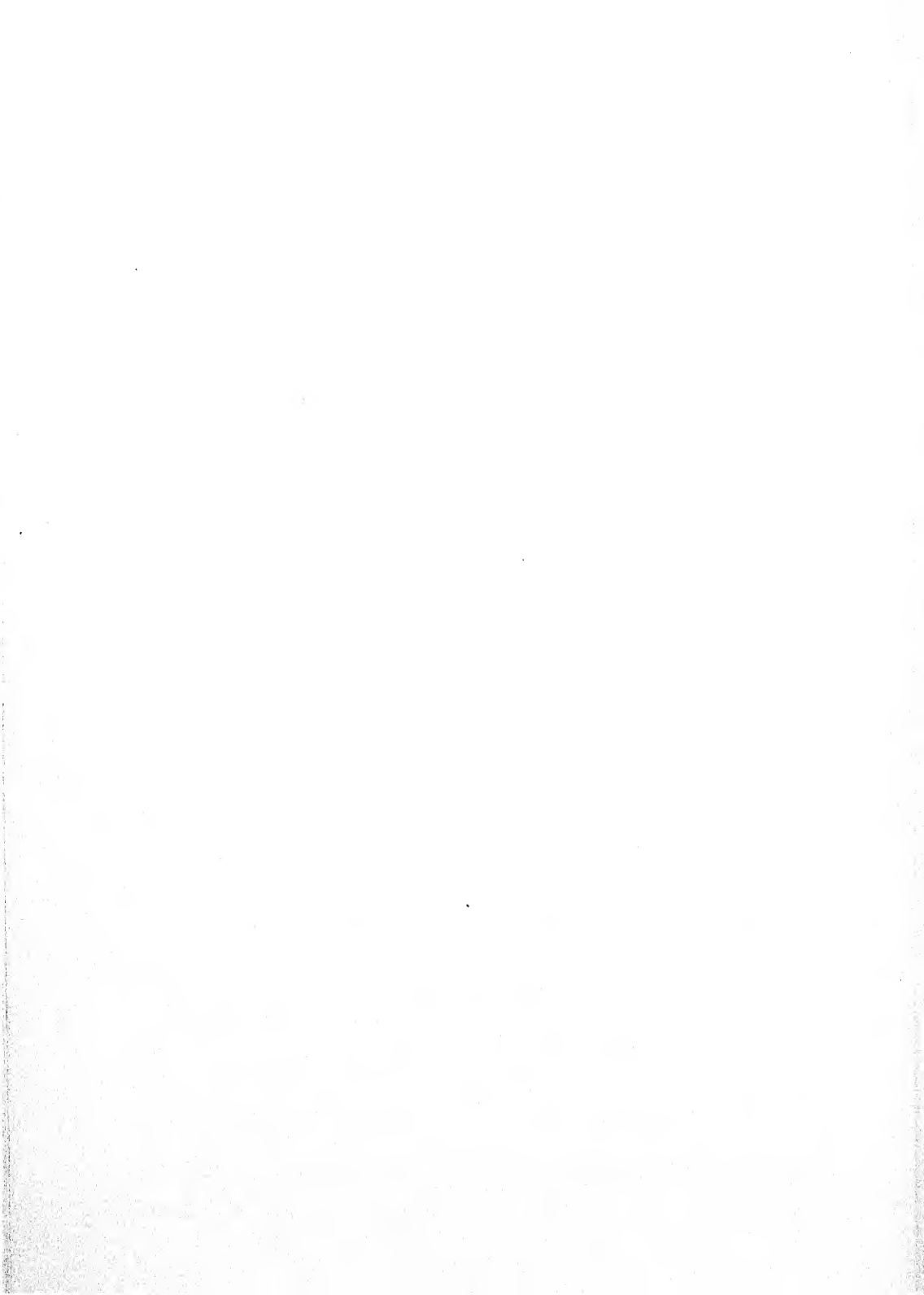
welfare. The agents of production in some industries (as in agriculture, for example) may be singularly immobile and unresponsive to changes in price relationships, and unduly great productive capacity may remain in existence long after a decline in the demand for the products has occurred. Finally, after many individual economic problems have been considered, there remains the super-problem of whether we should retain our capitalistic economic system despite its shortcomings or replace it with a system of socialism, communism, or fascism, which might present even more baffling problems of its own.

1. Explain the function performed by price changes in apportioning existing quantities of economic goods among consumers.
2. Would the problem of apportionment be important in a non-specialized economic system? Why?
3. "Existing amounts of economic goods may be apportioned among consumers either on the basis of prices or on the basis of physical quantities." Explain.
4. How is production controlled by the operation of the price system?
5. Why is the government likely to assume direct control over production in wartime? Explain.
6. How was production in the United States controlled by the government during World War II?
7. How are land and capital distributed among our various industries?
8. Does the operation of the price system distribute the existing labor supply among the various industries of the country? Explain.
9. Why and how did the government control the allocation of vital materials among industries during World War II?
10. Is the total amount of the labor supply subject to control by means of prices? Explain.
11. Is the total volume of savings controlled by price considerations? Explain.
12. "Investment is controlled more directly than saving by the rates of return that are obtainable." Explain.
13. Summarize the results that would be attained if our economic system operated perfectly on the basis of price relationships.
14. What is your estimate of the efficiency of the price system in apportioning finished economic goods among consumers?
15. What is the significance of monopoly and monopolistic competition in connection with the control of production by cost-price relationships? Explain.
16. "The apportionment of productive agents among industries and businesses is never perfectly adjusted to existing price relationships." Why?
17. What are the obstacles to the distribution of workers among places and occupations on the basis of differential wage rates? Explain.
18. How are business depressions connected with the operation of our economy on the basis of the price system and other capitalistic institutions? Explain.
19. Explain fully how differences in incomes help to prevent the perfect adaptation of production to basic human needs and desires under the price system.

20. "Even if all consumers had equal money incomes, money prices would not give us satisfactory expressions of all human wants and needs." Explain.
21. What is the importance of unmeasured costs in connection with the objective of obtaining maximum satisfaction at minimum cost? Explain.

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PART FOUR

The Distribution of Income



General Principles of Distribution

WE NOW ENTER UPON THE STUDY OF ANOTHER MAJOR DIVISION OF THE SCIENCE of economics. We have examined at considerable length the *production* of economic goods and the process by which the prices of these goods are determined. Our next step is to inquire into the *distribution* (or *apportionment* or *division*) of these economic goods among the members of society. In the present section (covering five chapters), we examine the payments that are made to owners of land, labor, and capital who allow these agents of production to be used in the economic process. This is usually called *functional distribution*. Later (in Chapters 27 and 28), we shall look into differences in the size of the individual incomes of members of society. This aspect of the subject is *personal distribution*.

THE NATURE OF DISTRIBUTION

Many writers on economics have described distribution by imagining a central point to which all members of an economic group come from time to time and deposit in a "goods heap" the commodities and services which they have produced and for which they desire credit. As evidence of his contribution, each producer may be supposed to receive a certificate which will enable him, at his convenience, to draw from the goods heap commodities and services up to the amount of his deposit. In a great economic area, such as the United States, there might be piled up in a single year of prosperity a goods heap amounting in value to some \$150,000,000,000, and presumably there would be withdrawn from this heap an equal amount of economic goods.

The Participants in Distribution. Who is it that takes part in the process of distribution? Obviously those who contribute, directly or indirectly, to the accumulation of commodities and services will expect to participate in the distribution of these economic goods. And to what extent does each producer share in the distribution of these goods, which in a given country may quite properly be called the national income? In general, to the extent of his importance in the task of producing the national income. For each depositor will insist on having as his share of the goods an amount no smaller than would be lost if he withheld his

productive efforts; and if competition exists, there is no reason to suppose that he need take less.

To be sure, the producer will not get in return the exact items that have formed his contribution. For as producer and depositor he is a specialist, placing upon the heap, in all probability, but one kind of economic goods; but as a claimant, cashing in on his certificates of deposit, he sees the situation from the consumer's point of view and demands a great variety of goods. Nevertheless, he will hope in all cases to receive *as great value* in commodities and services as he has contributed to the national goods heap.

The Size of the "Goods Heap." Our study of production has shown that there are four factors, or agents of production, though each of the four is capable of being divided into some hundreds or thousands of grades. The size of the goods heap, then, depends upon the productive efficiency of land, labor, capital, and business enterprise. If these factors of production are abundant and of high quality, and if they are properly combined and set to work, we expect to see, and do see, a large accumulation of economic goods over a period of time, say a year. The United States is an outstanding example. If one or more of the productive agents are scarce or of inferior grade, or if they are not used in the proper proportions, the national heap will be smaller. Italy, with extremely meager natural resources and a disproportionate quantity of labor, is a case in point.

But in all capitalistic societies the four factors are found at work, each contributing something to production; and in all such countries landlords, laborers, capitalists, and business enterprisers demand their respective shares of the national income in the form of rent, wages, interest, and profits. It is the division of income into shares for the owners of the various productive agents that constitutes distribution, as the term is ordinarily employed by economists.

The Relation of Distribution to Price. In our examination of price determination we saw that the competitive price of an economic good, in the long run, tends to equal the costs involved in producing it; and that these costs of production, in turn, consist of the sum total of the prices that must be paid for the use of the various factors employed in the production of the good. These productive factors, though of many types and grades, may be resolved into land, labor, capital and business enterprise. If we take as a starting point the four agents of production, we arrive at price by simply totaling these payments; and if we begin with price, distribution consists of dividing price into the parts of which it is composed—that is, into the payments demanded by owners of the several factors of production.

We see, then, the close relationship between price and distribution. Indeed, they are (as has often been suggested by economists) but different aspects of the same thing. Price, or the payment that is made for an

economic good, is merely the sum of the prices paid for the use of the several productive agents that were employed in producing it, the price of the good and the prices of the agents being determined simultaneously. It is upon the prices paid for the productive agents that we center our attention in making a study of distribution.

We have seen that the price of a good is determined by the conditions of supply and demand, price being set at that figure at which buyers are willing to buy exactly the quantity that sellers stand ready to sell. The payment for a productive agent (that is, the price that is paid for its use) is determined in precisely the same way. Hence, the share that the owner of a productive agent has in the distribution of income depends upon the relation between the supply of and the demand for this agent. The price at which the owners of a given agent are willing to give up the same quantity that enterprisers are willing to buy is the price which will be paid. It is clear, therefore, that the study of distribution is simply a continuation of the study of price determination, and it is pursued (as was true also of price) through an examination of the factors affecting the conditions of supply and demand.

MARGINAL PRODUCTIVITY AND DISTRIBUTION

The Concept of Marginal Productivity. In the analysis of distribution an attempt is made to find an answer to the question, How are rent, wages, interest, and profits determined; that is, on what basis is income distributed among the owners of the productive agents? We have already answered this question in a general way by suggesting that each contributor to the national heap of goods withdraws from the goods heap an amount of economic goods that is proportional to his importance as a producer. This is the central idea of a popular theory, the Marginal Productivity Theory of Distribution, which states that the share of each of the productive agents is determined by the *marginal productivity* of that agent. In the present analysis we shall not hold to this theory; that is, we do not suggest that the amount paid for the use of a unit of productive agent is *determined* by the marginal productivity of the agent. Indeed, we have already said that is always determined by the conditions of supply and demand. It will be seen, however, that marginal productivity plays a vital part in affecting distribution *on the side of demand*, and that there is a tendency for competitive price to *equal* marginal productivity. But this is only one side of the story. The theory of distribution is not complete until due recognition has been given to the supply of the productive agent, as well as to demand.

In speaking of marginal productivity, we shall have reference to the *value* of the marginal product. The marginal product is that amount of product which is dependent upon the use of a single unit of a given amount of productive agent. This single unit of any quantity of a productive

agent is called the marginal unit, as will be made clear in the next paragraph.

Let us refer again to a table which we used in Chapter 6, and which, for convenience, is reproduced on this page as Table 22. According to this table, the use of 6 units of bone meal in connection with the other factors of production would bring a total product of 20.2 bushels of wheat,

TABLE 22. EFFECTS OF BONE MEAL UPON THE YIELD OF WHEAT IN SOUTHEASTERN KANSAS
(Source: United States Department of Agriculture)

Varying Quantities of Bone Meal (capital)	Total Product (bushels)	Marginal Product (bushels)	Value of Marginal Product at		
			\$1.00	\$1.20	\$1.40
No bone meal used.....	10.6	....	....	....	....
1 unit (total 30 lbs.) used.....	14.9	4.3	\$4.30	\$5.16	\$6.02
2 units (total 60 lbs.) used.....	17.3	2.4	2.40	2.88	3.36
3 units (total 90 lbs.) used.....	18.7	1.4	1.40	1.68	1.96
4 units (total 120 lbs.) used.....	19.5	.8	.80	.96	1.12
5 units (total 150 lbs.) used.....	19.9	.4	.40	.48	.56
6 units (total 180 lbs.) used.....	20.2	.3	.30	.36	.42

the marginal product being .3 bushel. This marginal product is the difference between the total product when 5 units of bone meal are used and the total product when 6 units are used. The value of this marginal product, or its marginal productivity, would depend upon the price at which wheat could be sold. Hence, the value of this particular marginal product would be 30 cents, 36 cents, or 42 cents, depending upon whether the selling price of wheat was \$1.00, \$1.20, or \$1.40 per bushel, respectively. The sixth unit of bone meal in our illustration is said to be the marginal unit of bone meal, and the marginal unit is sometimes defined as the *last* unit to be employed. But the word "last" refers here to *quantity* and not to *time*. All units of bone meal must be thought of as being employed at the same time. The expression "the last unit" (or "the marginal unit") has to do only with the quantity of the productive factor in question—in the part of Table 22 that we are now examining, with the *difference between 5 and 6 units of bone meal*. This, as we shall see shortly, is not the same thing as the difference between 2 and 3 units, for it matters greatly, in applying the concept of marginal productivity, whether the marginal unit is one of many units of the factor, or one of few. Since all units of bone meal are (by hypothesis) precisely alike, the marginal unit is *any one* of the 6 units. The marginal product of this agent, bone meal, is the quantity of product that is added to the total product through the use of the marginal unit of bone meal, it being assumed that the quantities of the other productive agents remain unchanged.

Marginal Productivity and the Law of Variable Proportions. It is important to emphasize the fact that the marginal unit is one unit of a *total quantity* of a given productive agent, for the productivity of the marginal unit of any factor depends upon the number of units that are being used. The productivity of the marginal unit of bone meal when 6 units are employed is quite a different thing from the productivity of the marginal unit when only 3 units are used, if we assume that labor, capital, and business enterprise are the same in both instances. Reference to Table 22 shows that the marginal product is 1.4 bushels of wheat when 3 units of bone meal are employed, as against .3 bushel when 6 units are employed. From the Law of Variable Proportions¹ we learned that all of the factors of production are subject to the principle of diminishing returns; that if progressively larger quantities of any factor (whether of land, labor, capital, or business ability) should be combined with a fixed quantity of the other factors, diminishing returns would eventually result. Though the total product would increase with each addition of the variable factor, the product dependent upon the use of the added unit of the variable factor would be smaller than the product dependent upon the use of the preceding unit of the variable factor, once the point of diminishing returns had been reached.

In our earlier treatment of this principle, we remarked that it is often referred to as the Law of Diminishing Productivity. This name is especially appropriate in the present connection for it suggests, and quite properly, that if we assume more and more units of one factor to be used, without an increase in the quantities of the other factors, the marginal product of the variable factor would diminish progressively. Thus, if 3 units only of bone meal should be used in conjunction with a *given quantity* of other factors, the marginal product of bone meal (that is, the amount of product added to total product through the use of the *third*, or "last," unit of bone meal) would be greater than it would have been if 6 units of bone meal had been used, in which case the marginal product would have been the amount of product added to the total through the use of the *sixth* unit of bone meal. We see here the importance of the supply side of our theory of distribution, for the marginal product is smaller when the agent in question is employed freely than when it is sparingly used. Whether many or few units of the agent in question are employed, it is the marginal productivity (that is, the *value* of the marginal product of the agent) rather than the product itself with which we are concerned in our discussion of distribution.

Marginal Productivity Under Competitive Conditions

The Demand for and Supply of the Productive Agents. Since the production of economic goods is dependent upon the use of land, labor,

¹ See chap. 6.

capital, and business enterprise, and since these agents of production exist in limited quantities, it is possible for those in possession of the agents to obtain payment for their use, under a régime of private property. The amount of payment will depend in each case upon the importance of the agent when employed in a productive capacity.

The degree of economic importance, or marginal productivity, of an agent is related to its scarcity, as we have already seen. If it is available in large quantities and the demand is small, it will be poorly paid because it is but slightly useful in production. If it is extremely limited in quantity and is essential in the making of a good for which the demand is great, it will command a high price. But the price, whether high or low, will under competition bear a direct relationship to the marginal productivity of the agent, and the marginal productivity will depend upon the conditions of both supply and demand. The marginal productivity of a productive agent is great or small, depending upon whether the quantity available is *relatively* scarce or plentiful.

Demand and supply schedules and demand and supply curves may be drawn up and used quite as readily and satisfactorily in ascertaining the price of a productive agent as in determining the price of a finished good. Whether the agent in question is a particular type and grade of land, or labor, or capital, its price is determined by the relationship between the demand for and supply of the agent, that is, by an equilibrium between the supply of and demand for the agent. It is the general conditions of supply and demand that determine which unit is to be the marginal unit, and it is the value of the product of this unit that tends to equal (but does not itself determine) the price paid for the use of every unit of the agent. The principle of marginal productivity explains why enterprisers will pay as much as they do for a productive agent—that is, it explains the demand side of the equilibrium.

The extent to which a business man will employ a given productive agent depends upon the price that he must pay for it, in relation to the price he can obtain for the additional product which results from the use of the agent. Clearly, the careful enterpriser will not continue to employ any factor of production beyond the point of most profitable use.² But, equally clearly, he will not under competition cease to add units of a productive factor so long as he can secure for the additional product which results from their use a price that is more than enough to pay for the extra units.

The Price of the Marginal Unit. Table 22 shows the extent to which, in the illustration there given, the enterpriser would employ a particular kind of capital, bone meal, in the production of wheat. With wheat selling at \$1.00 a bushel, and bone meal at 75 cents a unit, he would use up to, but not beyond, 4 units; for the fourth unit would increase the total

²See chap. 6.

product sufficiently to bring in 80 cents of additional return, whereas the outlay for this unit of capital would be 75 cents.

Theoretically, at least, it would be possible to make the units of an agent so small that there could and would be virtual equality between the value added to total product through the use of the marginal unit and the price paid for that unit. For there is no reason to suppose that enterprisers would cease to add units so long as the necessary payment for these units was even slightly less than the price received for the extra product. Hence, units would be added until the equality that we have spoken of had been attained. It is customary, therefore, to say that the price paid for a productive agent tends to equal the full value of its marginal product; that is, every unit of the agent will command as much as every other unit, and this amount tends to be the value of the product of the marginal unit. But whether this amount is high or low will depend upon the general conditions of supply and demand as they relate to this particular productive agent.

The Price of an Agent in Its Alternative Uses. Not only will all units of a productive factor receive the same price in a given establishment and in the same type of industry, but the total quantity of the factor, if it can be used in many branches of economic activity, must be paid for at a uniform rate, no matter by whom or in what manner it happens to be employed. The principle of opportunity costs brings about this equalization in the unit price of every productive agent that has alternative uses. We saw in our examination of individual prices that a given grade of agricultural labor, which could be used in either cotton or corn production, would not be available for cotton growers at a lower price than that offered by corn growers, and vice versa. Therefore, no enterpriser (whatever his line of production may be) can secure the use of a productive agent at a lower figure than any other enterpriser will pay. But since all enterprisers who use the agent tend to use more and more units up to the point at which the cost of the final unit is just equal to the value of the additional product, we see that not only is there, in a competitive market, a uniform price for a productive agent throughout industry, but this price is uniform because there is a uniform marginal productivity for a productive agent throughout industry as a whole.

The Interdependence of the Productive Agents. If by any mischance we have given the impression that the various agents are productive separately and individually, it is high time to correct the misunderstanding, for it is but seldom true that a given agent, alone and unaided, is productive. In our illustration of wheat-growing, we saw that the addition of a fourth unit of bone meal brought an additional product of eight-tenths of a bushel of grain. But it would be wrong to say that the extra unit of fertilizer "produced" the additional wheat. It had a share in the production, to be sure, but so also had the other kinds of capital and

the land, labor, and business enterprise that were employed in this agricultural project. Just as it is impossible in the case of joint supply to determine the separate costs of the goods jointly produced, so in production of any kind it is impossible to separate the total product into shares and assign to each of the agents those units of product which each has produced. For the process is, after all, one of joint production, and each agent has had a part in producing each unit of the total product.

What can be done, however, is to ascertain the usefulness of the marginal unit of an agent by withdrawing a single unit temporarily and noting the loss in total product that results. When we have learned the amount of loss that is caused through the withdrawal of the marginal unit of a productive factor we know how much can be paid for each unit of the factor, and, moreover, how much *will* be paid for it, under conditions of perfect competition. This amount, it may be repeated, is determined by general conditions of supply and demand. Adding together all payments of this kind made to all factors used in producing a good, we get the total costs of production, which, under competition and in the long run, tend to equal the price of the good.

The Individual Enterpriser and Marginal Productivity. It must not be supposed that the average enterpriser makes a practice of calculating the marginal productivity of land, labor, and capital in the detailed manner we have just described, and thus determining the rates of rent, wages, and interest he will pay. It is the *consensus* of enterprisers in general, rather than the opinion of any individual enterpriser, that decides, in a given market at a given time, how much will be paid for a given grade of a productive agent—say, for the labor of a skilled mechanic.

The business man who needs such workers pays the market wage for this labor, purchasing the quantity he feels he can use advantageously at the prevailing wage. That quantity is, under competition, the amount which will have a marginal productivity equal to the wage that this type of labor is currently commanding. By hiring or refusing to hire workers, or by hiring few or many, the individual business man registers his judgment that the wage is or is not too high, but has himself no appreciable effect upon the situation. However, the actions of hundreds or thousands of enterprisers using a given type of productive agent *do* have an appreciable effect, and result in the distribution of the agent throughout the field on the basis of opportunity costs, as was described in Chapter 13.

Marginal Productivity Under Non-Competitive Conditions

Thus far in our discussion of marginal productivity, we have assumed that enterprisers who sell their products under competitive conditions have been dealing with competitive sellers of productive agents; and we reached the conclusion that, under these conditions, the price paid for

the use of a given productive agent tends to equal the marginal productivity of that agent.

This conclusion holds good, however, only for strictly competitive situations. Our study of price determination showed us that enterprisers who sell their products under conditions of monopoly, partial monopoly, or imperfect competition are able to secure a gain which would not be available under competition. This gain arises from the fact that these non-competitors sell goods at prices which are higher than their costs of production—that is, at prices higher than the sum of the amounts they pay to owners of the land, labor, and capital they have employed in making these goods. This is just another way of saying that these producers (because they have limited their output, and thus hampered to some extent the operation of the principle of diminishing productivity) have not had to pay the owners of the productive agents as much as the full marginal productivity of these agents.

It is evident, then, that the price and the marginal productivity of an agent of production do not tend to be equal when the agent goes into the production of goods sold under conditions of monopoly, partial monopoly, or imperfect competition. Nor do price and marginal productivity tend to be equal when the productive agent itself is sold under any of these three non-competitive conditions.³ Indeed, the usefulness of marginal productivity as a *strict* measure of rent, wages, and interest is limited to the field of competition. But as an *approximate* measure it has a much wider field of usefulness, as we shall hope to make clear in the following five chapters.

Distribution is the apportionment or division, among the owners of the agents of production, of the economic goods produced by society.

Marginal product is that amount of product which is dependent upon the use of a single unit of a given productive agent employed in connection with quantities of other factors that remain unchanged.

Marginal productivity is the value of the marginal product.

1. Define "distribution."
2. Give a synonym for "distribution."
3. Who are the sharers in distribution?
4. Why does the United States have a large national income *per capita* and Italy a small one?

³ This phase of the subject is particularly well treated in J. E. Meade and C. J. Hitch, *An Introduction to Economic Analysis and Policy*, New York, Oxford University Press, 1938, pp. 151-158.

5. What is the relationship between price and distribution?
6. We frequently use the term "marginal productivity." What is the significance of the word "marginal" in this connection?
7. Is the amount paid for the use of a productive agent determined by the marginal productivity of the agent, or is it not? Explain.
8. Distinguish between marginal product and marginal productivity.
9. The marginal unit of a productive factor is said to be the *last* unit of that factor to be employed. Show that the word "last" refers to *quantity* and not to *time*.
10. Of what significance is the Law of Diminishing Productivity in connection with the consideration of marginal productivity?
11. Up to what point will it pay an enterpriser to keep adding to his business further units of a given productive agent?
12. What is the "marginal unit" of a factor of production?
13. It is customary to say that the price paid for a productive agent tends to equal the full value of its marginal product. Why should this be true?
14. What is it that determines whether the amount paid for the marginal unit is high or low?
15. It is said that the productive agents used in the making of a commodity are *interdependent* and not *independent*. What is the significance of this statement?
16. Discuss *marginal productivity* as a measure of rent, wages, and interest, under both competitive and non-competitive conditions.

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Rent

WE SHALL NOW CONSIDER, IN TURN, THE FOUR AGENTS OF PRODUCTION, AND examine the manner in which the amount paid for the use of each agent is determined. We take up, first, the share known as rent, which is a *payment made for the use of land*. Since the supply of land is practically fixed, we shall deal chiefly with the demand side of rent determination.

THE NATURE OF RENT

The Use of Land in Production. In general, the demand for land is based upon its usefulness in production. Land may be useful in any of several ways. It may possess the characteristics essential to the production of agricultural crops; it may be rich in mineral deposits, such as coal, iron, or petroleum; or, by reason of a favorable location, it may be suitable for use as a building site. We shall deal first and chiefly with the rent of agricultural land, which does not differ in nature from rent on building sites; and shall later discuss briefly the rent, or royalty, paid for the use of land that is desired for the extraction of minerals.

Let us begin with several assumptions that are contrary to fact, and, having discovered the causes and nature of rent, proceed to examine such conditions as may readily be observed in everyday life. Our first assumption is that there are no differences in the quality of land (all acres being precisely the same grade) and that it is available in unlimited quantities. Land under these conditions cannot command a rent, for our hypothesis places it in the category of free goods. Certainly no one will pay a price for a good that can be had for nothing, as is the case with land that exists in unlimited quantities.

Rent on Land of Uniform Quality. But, narrowing our assumption slightly, we may suppose that the land is of uniform quality; that it is so restricted in area that every acre has come under private ownership; and, furthermore, that it is being cultivated up to, but not beyond, the point of diminishing returns. Under circumstances such as these, rent need not be paid. But if any part of this land, say an acre, should be withheld from use, or if there should appear in the market an additional unit of capital and labor seeking profitable employment, the situation would be materially changed.

Let us suppose that an acre of land is withdrawn from use, though an increase in capital and labor would bring about a similar result. Land will now be scarce in relation to capital and labor, it will be cultivated beyond the point of diminishing returns, and the owners of land will be in a position to demand and receive rent. This statement is based upon the principle of diminishing productivity. In explaining the situation, let us make the further assumptions that the land is being used for the growing of wheat; that each of the identical acres, when cultivated with one unit of capital and labor, yields 25 bushels of grain; and that (owing to the workings of diminishing returns) a second unit of these agents added to a single acre would raise the total yield of that acre to 45 bushels, increasing its output by 20 bushels.

Rent must now be paid for the use of this land, since the withdrawal of an acre from production would reduce the effectiveness of the capital and labor that have been employed on this acre. For, in order to find profitable employment, this capital and labor would now have to be applied to an acre or acres already being cultivated up to the point of diminishing returns. Thus employed, the agents that have been transferred would suffer a loss in productivity. Whereas they had produced 25 bushels of wheat with the aid of the acre of land on which they were originally used, their present productivity, as is indicated by the increased yield of the acre on which they are now used, would be but 20 bushels. The withdrawal of an acre would involve, therefore, a loss of five bushels. A tenant farmer using an acre of this land could afford to pay a rental up to the amount of five bushels, and would probably make the payment rather than give up the acre. Strictly speaking, it is a matter of indifference to the tenant whether, on the one hand, he retains this acre, paying five bushels for its use and having left 20 bushels for his labor and capital; or, on the other hand, he uses this labor and capital on another acre that he is already cultivating, and gets for their use the amount which they add to the total product of that acre (namely, 20 bushels).

The acre about which we have been talking is the marginal acre of land, *which may be any one acre of the entire given quantity*; and the five bushels that would be lost through the withdrawal of the acre constitute the marginal product, since they measure the productivity of the marginal acre. But we must remember that it is the equilibrium of supply and demand that decides which acre is to be the marginal acre, and which consequently decides whether the marginal productivity of land is to be great or small. Because this is true, it follows (perfect competition being assumed) that the rent of land will tend to equal its marginal productivity. Hence, by ascertaining the marginal productivity of a given type of land, we may learn also the amount of rent it will command. However, the forces back of the determination of rent are, as we have observed, the demand for the land (based upon its marginal productivity) and the supply of land (which is practically fixed).

Rent for Land of Different Grades. But we must give up the assumption of land of uniform quality, and consider the phenomenon of rent as it manifests itself in the world of reality. Land varies greatly in fertility and location. In discussing agricultural land we are interested mainly in the fertility of the soil and its suitability in producing crops; consequently we omit from our present discussion whatever advantage this agricultural land may have in the way of favorable location. In the growing of wheat or other grain, it is found that some acres are extremely productive, some are good, some fair, some poor, and still others must be accounted very poor. Fig. 32 pictures the situation graphically, with the solid lines indicating the number of bushels of wheat that could be produced on land

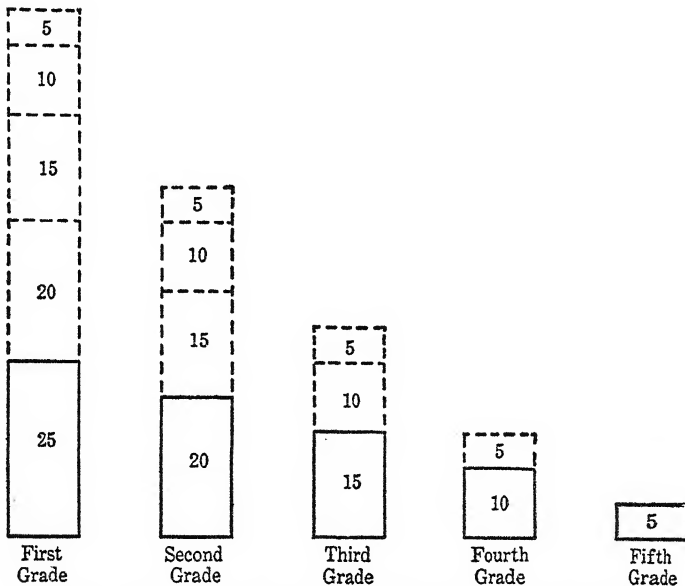


FIG. 32. THE CULTIVATION OF LAND OF DIFFERENT GRADES

The diagram shows the principle of diminishing returns at work on each grade of land; "intensive" and "extensive" margins; and the equalization of "marginal products" of identical units of capital and labor when applied to land of different qualities.

of different qualities with the use of identical quantities of capital and labor. The broken lines show the effects of additional applications of these factors. In each case the quantity of land is a single acre, and we are trying to see what the effects would be if capital and labor were added (one unit at a time) in units of uniform size which include unvarying proportions of these two agents of production.

When land of different qualities is available for cultivation, as in a newly settled region, it may be expected that the best land will be utilized first, and that of inferior quality later. The situation arises from the ex-

ercise of common sense on the part of the settlers; for the acres of best grade will produce, with a given expenditure of capital and labor, a larger product than can be had from less fertile acres. Moreover, the best land will be cultivated intensively up to the point of diminishing returns before there is any temptation to produce on even slightly inferior land. For up to this point, a unit of capital and labor can be used more productively on first-grade land than on land of other grades.

The Effects of Diminishing Returns. In Fig. 32, we assume that diminishing returns set in immediately after the application of the first unit of capital and labor to each of the several acres of land of different grades. The workings of diminishing returns are shown graphically through the use of areas marked off with broken lines; the progressively smaller additions to total product which result from the use of additional units of capital and labor on a single acre of land are indicated by progressively smaller areas enclosed by broken lines. If one unit of capital and labor were used on an acre of first-grade land, the product would be 25 bushels, and further units of capital and labor would increase the total product as follows: The second unit would add 20 bushels; the third unit, 15 bushels; the fourth unit, 10 bushels; and the fifth unit, 5 bushels.

But long before a fifth unit of capital and labor was applied to the best land, it would doubtless occur to farmers that it might be more advantageous to call into use some of the less fertile land, instead of depending wholly upon the cultivation of a limited quantity of first-grade land. We may reasonably assume that, through experimentation, it has been ascertained that if only two units of capital and labor were available they could be used with equally good results in two ways. For, as is shown in Fig. 32, both units could be applied to an acre of first-grade land, or one unit could be used on first-grade land and the other on second-grade land; and in each instance the result would be 45 bushels of product. This is true because we have assumed in our illustration that a first unit of capital and labor applied to second-grade land would be exactly as productive as a second unit applied to first-grade land. (In actual practice, it *might* of course be equally productive, more productive, or less productive. If it were *less* productive, the farmer would naturally employ this unit of capital and labor as a *second unit on first-grade land* rather than as a *first unit on second-grade land*.)

Holding, for the moment, to the assumption that there are but two units of capital and labor to be had, we see, by reference to Fig. 32, that only one of the two could be utilized in such manner as to bring a product of 25 bushels. The second unit, if added to the first and applied to the one acre of first-grade land, would bring only 20 bushels of additional product because this acre would then be cultivated beyond the point of diminishing returns. And if this second unit were used on the acre of second-grade land, it would again bring in a product of only 20 bushels,

owing to the fact that second-grade land is less fertile than land of first quality. If three units of capital and labor, instead of two, were available, it would be most advantageous to use two units on the best acre and the third on the acre of second-grade land. If there were six units of capital and labor, they would presumably be disposed of (as shown in Fig. 32) by using three units on first-grade, two units on second-grade, and one unit on third-grade land.

Equalization of Marginal Products of Capital and Labor. Fig. 32 indicates the way in which we might expect fifteen units of capital and labor to be utilized on five acres of land of different kinds. It will be noted that capital and labor would be applied in such manner that the final application on each grade of land would bring a return exactly equal to the return from the final application on all other grades of land. This is necessarily the case, for if a unit of capital and labor were less productive in one place than in another, it would be shifted promptly to the more favorable position. The result is an equalization of marginal products, as was explained in the preceding chapter. The last unit of capital and labor to be applied to each grade of land may be thought of as a marginal unit, and the extra product that is forthcoming because of its use, as the marginal product. In the illustration it is shown that the marginal product of a unit of capital and labor is five bushels, and that this marginal product is the same on all grades of land.

THE CALCULATION OF RENT

The Marginal Product of Land. But for the present we are seeking the marginal product of land, and not of capital and labor. Our method is to withdraw one unit (say, an acre) of land from use, and note the extent to which production declines. This amount is the marginal product of this kind of land, and the value of this product is the share of income which may be secured for its use. We shall now undertake to determine the marginal product of third-grade land, the productivity of which is indicated in the third column of the diagram. To accomplish this result, we must drop the fiction that there is but one acre of this kind of land in use, and grant the existence and utilization of many such acres. Let us suppose that there are 1000 acres of third-grade land in use. Every one of these acres is being cultivated, of course, just as intensively as every other acre. This means that each acre yields 30 bushels of product when three units of capital and labor are applied to it. The removal of one acre from production might be expected, therefore, to lessen the total product by 30 bushels (see the third column of Fig. 32) and so it would, if the capital and labor previously used on this acre were allowed to lie idle. But they would naturally be employed somewhere if they could in this way be made to bring in a return. It is reasonable to suppose

that they would be applied to those acres of third-grade land which were still under cultivation, though they might instead be applied to other grades of land without affecting our argument.

How productive would they be in this new capacity? The question cannot be answered with absolute exactness, but we can arrive at a figure that is substantially correct. If 1000 acres of third-grade land have been cultivated in the past, with a yield of 30 bushels per acre, the total product has been 30,000 bushels. If one acre is withdrawn, the total drops to 29,970 bushels. But the three units of capital and labor formerly used on the acre now withdrawn from use can be applied to the remaining 999 acres. The marginal product per unit of capital and labor, when applied on 1000 acres of third-grade land, was five bushels. With the same number of units applied to 999 acres, the cultivation is slightly—but only very slightly—more intensive. The marginal product would remain, therefore, approximately five bushels per unit of capital and labor. Thus the three units that have been released would add *about* 15 bushels to the total product, bringing the production for the 999 acres up to 29,985 bushels.

Hence, the withdrawal of an acre of third-grade land would be accompanied by a net loss of 15 bushels. Fifteen bushels, therefore, constitute the marginal product of third-grade land, and the value of these 15 bushels is the amount that owners of such land could exact from tenants in the form of rent. By going through a similar process of calculation, it would be possible to discover the marginal productivity, and consequently the rent, of land of any kind.

Intensive and Extensive Margins of Cultivation. The diagram illustrates very well the intensive and extensive cultivation of land. More and more units of capital and labor are used on the superior grades of land, but eventually a point is reached at which the cost of the unit of capital and labor is just equal to the value of the extra product that results from its use. This point is the “intensive margin” of cultivation; and it will be observed that there is an intensive margin for every grade of land. There is also an “extensive margin” of cultivation, but it is to be found on only one grade of land—the poorest grade that it pays to bring under cultivation, which is that grade on which it is possible to produce just sufficient goods to cover the payments that must be made for labor and capital, but no more.

“Marginal” or “No-Rent” Land. The poorest land in use is commonly called “marginal” land. It is also known as “no-rent” land because it yields so slight a product that it would not be cultivated if it could not be obtained rent-free. The product to be had from marginal land reimburses the farmer for his expenditure of capital and labor, but that is all. Fifth-grade land in Fig. 32 is marginal, or no-rent, land, and its total product per acre is five bushels. The diagram shows that a unit of capital and

labor, such as is being used on fifth-grade land, cannot be obtained for less than the value of five bushels. Consequently, an attempt to exact a rental for the use of fifth-grade land would be doomed to failure, since it would result merely in the withdrawal of capital and labor from such land, and its application elsewhere.

Shifts in the Margins of Cultivation. It should be noted, however, that the margins of cultivation, both intensive and extensive, may shift as a result of changes in the cost of one or more of the productive agents that are being applied to the land, or in the selling price of the product. If, for example, capital and labor became exceedingly plentiful and therefore very cheap, it might pay farmers to use these agents in vastly larger quantities, thus increasing both the intensiveness and the extensiveness of cultivation. More units of capital and labor would then be employed on each of the better grades of land, and land formerly regarded as too poor for cultivation would be brought under the plow.

An increase in the selling price of the product would have a similar effect. The high prices obtainable for coal and wheat in war times almost invariably result in reopening abandoned mines and growing wheat on land which was previously thought too unproductive for any good use. An increase in the costs of capital and labor, or a decrease in the selling price of the product, would have an opposite effect. Either of these changes would lessen the intensity of cultivation on the better grades of land, and would cause the abandonment of marginal land which, under the new conditions, could not be used profitably and would therefore become submarginal—that is, too poor for current utilization.

Rent as a Surplus. Another method of determining rent is by calculating the productivity of capital and labor on the superior grades of land, and comparing the results with the productivity of the same capital and labor when used on marginal land. Turning again to Fig. 32, we see that five units of capital and labor employed on an acre of first-grade land bring a total product of 75 bushels. The same amount of capital and labor used on fifth-grade, or marginal, land would produce only 25 bushels. The difference, 50 bushels, indicates the superior productivity of first-grade land as compared with no-rent land. It is a surplus resulting from the use of superior land, and represents the amount that can be charged by the owner of first-grade land, in the form of rent, for the use of one of his acres. Since the landlord can charge as much as this, he assuredly will not charge less; nor can he charge more, for an attempt to do so would result in driving tenants from first-grade to marginal land where each unit of capital and labor would have a return of five bushels.

The three units of capital and labor which, in our illustration, are used on third-grade land would produce 15 bushels on marginal, or no-rent, land. They now produce 30 bushels. The difference, 15 bushels, is the rental of an acre of third-grade land, when figured as a differential

surplus which is attributable to its productive superiority over marginal land. But 15 bushels were also the amount of rent that we arrived at when we computed the marginal product of third-grade land. The result, then, is the same, whichever method of calculation is employed.

Agricultural Land, Building Sites, Mineral Land. In dealing with agricultural land, we have naturally emphasized the fertility of the soil as being chiefly responsible for the productivity of the land, and consequently for the rent that can be had for its use. But the location of land is not without significance even in the case of agricultural areas, and location is of prime importance in rendering urban land "productive." The part played by location in affecting the rent of farming land may be seen by comparing the rental of a truck farm near a great city, such as New York or Philadelphia, with that of a similar piece of land in a region remote from dense population. The ability to get the "truck" to the consumer promptly and cheaply may sometimes be quite as important as an unusual yield per acre.

But in the case of urban land, fertility counts for little or nothing, and location is all-important. Of course, if the land is to be used for residences, certain qualities of the land (such as elevation, slope, and natural beauty) may be considered. These items, indeed, will be charged for by the landlord. But they are less vital, in determining the rent of residential sites, than the social and economic standing of the neighbors; the proximity to schools, churches, theaters, and other social centers; and adequate transportation facilities. These matters, it will be observed, relate to location and not to the quality of the land itself.

Location is of even greater significance when land is to be used for business purposes. A theatrical manager wants his playhouse to be in a theatrical district; a manufacturer oftentimes selects a building site because it is near raw materials and labor supply; and a merchant builds his store, if possible, on a plot of land that is passed by thousands of persons daily. The Wanamaker store in Philadelphia, for example, stands on a piece of land that is said to be valued at some \$25,000,000. This high valuation, and the high rent that must be paid for the use of this lot, are not attributable to any natural qualities of the land, but are due to the excellence of its location for purposes of merchandising, and to the scarcity of land so admirably situated.

Rent paid for the use of mining land is usually called "royalty," and is in reality a payment made for the natural product that is extracted and will never be returned to the land. This is quite a different thing from the use of land for farming and building purposes, for the tenant farmer is expected to maintain the fertility of the soil year after year, and the use of a plot of ground as a building site does not wear out the land. The mine operator, however, is continually removing from the land a valuable commodity, with the result that its usefulness as mineral land will eventu-

ally be wholly destroyed. The farmer and manufacturer pay a rent of so much per acre or front foot, but the mining enterpriser pays a royalty of so much per ton of coal or barrel of petroleum taken from the ground. Indeed, he may be said to be actually buying the coal mine or oil field by slow degrees, since it will cease to have value as mineral land once he has brought to the surface the coal or oil for which he is paying a rent, or royalty.

Productivity, the Source of all Land Income. In one very important particular, the payments made for these three kinds of land are identical. That is, these payments represent, in each instance, the marginal productivity of the land for the use of which they are made; and they are high or low, depending upon whether the marginal productivity of the particular kind of land being considered is great or small. Farms that are unusually fertile command a high rent; building sites that are well located are paid for at fancy prices; and mines that contain high-grade ores bring in to their owners large royalties from those who are anxious to exploit these mineral resources.

We insisted in the preceding chapter that the price paid for the use of a productive agent, like that paid for an economic good of any kind, is determined by the general conditions of supply and demand. In our discussion of rent we have had little to say about supply, but have dealt chiefly with demand, as it is affected by marginal productivity. There has been slight need to emphasize supply in analyzing the rent of land, since, in a practical sense, the quantity of any given kind of land is fixed. Though rent is paid only because of the productivity of land and though (if we assume perfect competition) the rent of a particular type of land cannot be higher or lower than its marginal productivity, it is not quite correct to say that marginal productivity determines the rent that will be paid. For marginal productivity itself depends upon the quantity of land that is available, being high if land is scarce and low if it is plentiful. The truth is that the supply of and demand for land of this kind determine its rent, with marginal productivity exerting a powerful influence on the demand side of the problem. Supply, being fixed, does not here play so active a part as it does in the determination of wages and interest.

RENT AS AN EXAMPLE OF PRICE DETERMINATION

Let us now examine rent as a problem in price determination. Considering first the determination of rent in the short run, we note that the condition is that special type of short-run supply which is known as fixed supply. For not only is the quantity of land incapable of increase, but it cannot be decreased, except in the sense that it may be rented—either to oneself or to another, yielding in the first case “implicit” and in the second “explicit” rent, as we shall observe presently. The point to be

emphasized here is that, as always in the case of fixed supply, the total stock will be disposed of—at a high price if possible, but at a low price if necessary. The stock of land is supposed, of course, to be in the hands of many owners, so that the condition is one of competition.

If we assume that there are 5 million acres of a particular kind of land, we may draw a supply curve, as in Fig. 33, showing that it will be rented at whatever price is obtainable. *SS* is such a supply curve. *DD* is the demand curve for land of this kind, and, like all demand curves, it pictures a series of quantities which would be taken at a corresponding series of prices. Land may be wanted for purposes of consumption (as when it is to be used for residences, private grounds, and so on) or for purposes of production (as in agriculture, manufacturing, and merchandising). In the present chapter we have studied the significance of the marginal produc-

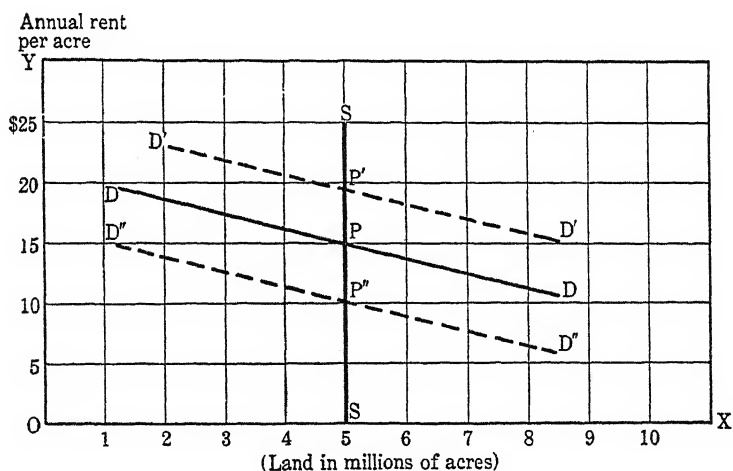


FIG. 33. THE DETERMINATION OF RENT FOR A PARTICULAR KIND OF LAND UNDER COMPETITIVE CONDITIONS

The stock constitutes a fixed supply (*SS*), and the rent is determined by the relationship between supply and demand (*DD*).

tivity of land as measuring the maximum amount which a productive renter would pay for its use. In any event, the demand curve includes all bids of all persons who are interested in gaining possession of the land, whether for use in production or in consumption. The equilibrium of supply and demand at the point *P* indicates the price, or the rent, of this kind of land under the assumed conditions. As is shown in Fig. 33, the rent would be \$15 per acre for the grade of land used in our illustration.

If the condition were one of monopoly instead of competition, it is conceivable that the owner of the land would gain more by renting a part only of his total holdings, allowing the remainder to go idle. This situation

would be comparable, of course, to a monopolist destroying a part of his stock of a commodity in order to secure a larger total return than could be had from the sale of the entire stock. In our illustration it appears that the monopolist would lose rather than gain by this action, so that he would presumably rent all of the land; but his course of action in this respect would be dictated by the demand schedule for land of this kind. If, for example, the demand schedule showed that renters would be willing to take 4 million acres at \$20 per acre, the monopolistic owner would doubtless withhold 1 million acres from use, and thus reap a monopoly profit of five million dollars.

There is nothing resembling costs of production in our determination of rent, since land, by definition, consists of natural resources created without the aid of labor. Since the quantity of land will remain fixed, the supply curve will not change with the passage of years, and in the case of the land which we are considering will always be the curve that is shown in Fig. 33. Indeed, the most that we can say about rent in the long run is that it may be expected to vary directly with changes in demand for land. An expanding population is likely to bring about an increase in the demand for land as the years roll by. Consequently, the price of our hypothetical grade of land would probably experience an increase decade by decade, and possibly even year by year. This increase, which would be dependent upon an increase in demand, may be indicated by drawing a new demand curve, $D'D'$. There is also a possibility, of course, that demand will decrease, as shown by the curve $D''D''$, in which case the price paid for the use of this land would likewise decrease.

ATTITUDES TOWARD RENT

Two Concepts of Rent. We have defined rent as a payment made for the use of the land, and have had in mind constantly the fact that land, from the economist's point of view, consists of natural resources that have been created without the aid of labor.

It is difficult, however, to find any land in use on which man has not made some improvements. Building sites have obviously been improved, in the economic sense, when houses, stores, or factories have been erected. A piece of agricultural land likewise is almost always "improved" in a way which makes it hard to distinguish *land* from *capital*. For agricultural land is usually fenced, it is sometimes drained or irrigated, and its usefulness is frequently dependent in part upon the construction of a house and barn. When a farm of this kind is leased to a tenant, just how much of the return that goes to the landlord can properly be termed rent? The answer depends upon whether one is viewing the situation as a business man or an economist.

From the business man's point of view, the whole return would be

regarded as rent, since he thinks of the entire farm as an investment bringing him an annual income. But the economist finds it desirable, though sometimes difficult, to separate the return that is attributable to the improvements from that which results from the productivity of land in the narrower economic sense. The latter he calls rent; the former is interest, since it is a payment made for the use of capital. It is not always feasible to draw a sharp line of demarcation between land and capital, but it is usually possible to estimate approximately how much of the total income from improved land should be credited to the capital investment; and once this is known it is an easy matter, of course, to figure the amount that should go to the owner of land, since this amount is the difference between the total income and the portion that must be paid in the form of interest.

Differences Between Land and Capital. There is no need, in a book of this kind, to dwell at length upon the differences between land and capital. But it will be worth our while to note two important points of difference. In the first place, land is, for all practical purposes, fixed in quantity, whereas the amount of capital may be greatly increased. The area of usable land is, it is true, added to slightly from time to time by drainage, irrigation, the building of dikes, and similar projects. The increase, however, is quantitatively of relatively little importance; moreover, this "made land" does not conform strictly to our definition of land. But the capital of the world increases by leaps and bounds. The growth of population creates new and larger demands for land, and, since the quantity available remains fixed, the price (or rent) mounts rapidly. The demand for capital also increases with the expansion of population, but the supply of capital may keep pace with the demand, and as a consequence the price paid for its use (interest) changes only little.

The second distinction between these two productive agents has to do with the fact that, if society so decreed, the payment of rent to individual landlords could be abolished without affecting in the slightest the amount of land available for production; the abolition of interest, however, would reduce the accumulation of capital and thus interfere with the making of goods. If, for example, the people of a country should decide to appropriate all land rent through a system of taxation, there is no reason to suppose that the land would not continue to be used as in the past. But if interest were not paid to owners of capital, consumption would increase and savings would fall off, and as a result the industrial machine would presently be inadequately equipped. We shall discuss in a later chapter the usefulness of interest in encouraging the building up of a large quantity of capital.

Explicit and Implicit Rent. Nothing has been said thus far, in our discussion of rent, about the landowner who does not lease his land to another but uses it himself. It is correct, in a case of this kind, to say that

the land yields a rent, but this is known as *implicit rent*, whereas we have been talking chiefly about *explicit rent*. Explicit rent is the rent paid by a tenant to a landlord. It is paid because of the productivity of land which the owner permits the tenant to use. The amount of rent paid for the use of a piece of land is a measure of the usefulness, or productivity, of the land. But this land, if used by the owner himself, would still be useful. If it is agricultural land, then the productivity which the owner, as a farmer, enjoys through use of the land, he as a farmer should pay to himself as landlord. The actual payment may not take place, and yet in a situation of this kind rent exists just as truly as under a landlord-tenant arrangement. Therefore, the owner of land who uses his land himself receives rent—in this case implicit rent; the landlord who leases his land to a tenant receives rent, which is called explicit rent.

The Value of Land. It is often desirable, for purposes of sale or taxation, to know the value of a piece of land. Land is wanted, of course, for the income which it brings to the owner. This income is readily determined if it takes the form of explicit rent, for then it consists of the money payment made by the tenant to the landlord. And if the owner is using his land himself, the rent may be ascertained by comparing his land with similar land on which explicit rent is being collected. When the amount of rent is known, the value, or price, of the land may easily be calculated by “capitalizing” the rent at the prevailing rate of interest.

If, for example, the interest rate is five per cent and a piece of land is renting for \$1000 a year, its value must be twenty times \$1000, or \$20,000. If \$20,000 were lent out at five per cent interest, the return would be \$1000 a year. Hence, any commodity, such as a piece of land, that brings in a yearly income of \$1000 is worth \$20,000 when the interest rate is five per cent. If the rate were only four per cent, the value of a piece of land yielding \$1000 a year would be \$25,000; and if the interest rate were ten per cent, its value would be only \$10,000. The value of land, then, depends upon the income which it will bring to its owner, instead of determining, as some persons think, the amount of rent that the owner is able to exact from a person using the land.

Rent is a payment made for the use of land.

Marginal land, or *no-rent land*, is land upon which can be produced goods which have a value just sufficient to cover the necessary payments for labor and capital used in their production.

1. Define "rent."
2. Distinguish between the intensive and extensive margins of cultivation in the use of land.
3. How do you account for the equalization of "marginal products" of identical units of capital and labor when applied to land of different qualities, as illustrated in Fig. 32?
4. What are the qualities that make agricultural land particularly productive, and what qualities are especially important in the case of building sites?
5. How does the royalty paid for the use of mineral land differ from rent paid for the use of agricultural land?
6. Distinguish between the business man's and the economist's concepts of rent.
7. In what important respects, so far as distribution is concerned, does land differ from capital?
8. Distinguish between implicit and explicit rent.
9. How may one calculate the value of land if he knows the amount which can be secured for its use?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 18.

Wages

WAGES ARE A PAYMENT MADE FOR THE USE OF LABOR. WE HAVE DEFINED LABOR as human energy expended for the purpose of acquiring income. Whether the labor is of high or low quality, whether it is very scarce or fairly plentiful, and whether it brings in a large or small income, it is still labor if it meets the requirements of this definition.

Money Wages and Real Wages. We have already discussed the difference between money income and real income, noting the fact that money income consists of the number of dollars, or other monetary units, that one receives over a period of time, while real income is made up of the commodities and services one is enabled to enjoy through the expenditure of money income. The distinction between money wages and real wages is very similar. Money wages are a form of money income, and are a money payment made for the use of labor; real wages are the economic goods that the workers secure when they spend their money wages.

Real wages, of course, are vastly more important to the worker than money wages. The latter are sometimes very deceptive. For money wages may seem to be high until translated into real wages through the purchase of commodities and services, when it may be discovered that in reality they are very low, because the purchasing power of money has been greatly reduced by a rise in the price level. On the other hand, real wages may be higher than is suggested by the size of the money wage, because prices in general are unusually low.

It is important, in considering wage data, to give attention to actual earnings and not merely to wage rates. Moreover, the earnings should relate to more than a few weeks, or even months, if one is to get an accurate idea of the adequacy of wages in seasonal occupations, such as mining, in which there are sometimes weeks or months of enforced idleness every year. The rates per hour, per day, or per unit of product do not in such instances tell the whole story. But if money wages actually earned over a fairly long period (say, a year) are known, and an index number of purchasing power is available, it is possible to interpret wages in terms of commodities and services, and in this way to ascertain whether the wage earner's standard of living is rising or falling. The use of actual earnings makes it possible, moreover, to compare the economic status of workers in one occupation with that of workers in other occupations.

When, therefore, we speak of wages, we shall have in mind the average yearly real wages of labor.

THE DETERMINATION OF WAGES

Wages Under Simple Conditions of Production. Labor is used at times in combination with very small quantities of land and capital; and, again, it is employed with large quantities of these productive agents. The importance of labor as a factor of production is most apparent when it is seen at work on free land, operating with little or no capital. Let us consider the productivity and the wages of laborers engaged in gathering wild berries, catching fish, trapping small game, or making crude pottery. These activities might easily be conducted on free land, some few miles distant from a settled community or railway junction, at which point purchasers for the goods could be found. Under these conditions, the workers would have no rent to pay. Moreover, the expense for fishing tackle, traps, and similar equipment would be so slight that it would cut a small figure, and it may therefore safely be disregarded in the present discussion.

In circumstances such as these, whatever the producer of these goods could secure for his commodities in the way of price would go to him alone; and this amount, whether large or small, would consist only of wages, for there would be no payment to be made for the use of land, and the cost of the capital used, per unit of salable commodity, would be infinitesimal. In the economic sense, commodities produced in so simple a manner would be the product of labor alone, and the amount that the commodities commanded when sold would measure the productive importance of that labor. This amount (and this is true of the price paid for any kind of consumers' goods) would measure also the utility or desiredness of the marginal unit of the good to the marginal purchaser.

Under these conditions, it would be difficult to disprove the statement that the laborer receives for his efforts the full value of the economic importance of his labor. But the size of his reward for this labor would not necessarily bear any relation to the amount of energy exerted. Payment would be made not on the basis of effort expended, but on the basis of the supply of and demand for the product. With no need to pay any productive agent except labor, the quantity of the commodity would be limited only by the unpleasantness or disutility of expending effort in production. The demand for the commodity would depend upon its utility. The price of the good would be determined by an equilibrium between (1) the supply of the good, as limited by the disutility of the labor required in its production, and (2) the demand for the good, as affected by the utility (or desiredness) of the good and by purchasing power. This amount, under the conditions outlined above, would go to labor.

It is worth while in this connection to emphasize the fact that if the withdrawal of a unit of labor results in the loss of economic goods which are much desired, the importance of that labor will be reckoned at a high rate, and a large payment will be made to avoid its withdrawal from production. Contrariwise, only a small payment will be made for the use of a unit of labor, the withdrawal of which means the loss of goods that are not highly valued. When, then, berries and fish are offered in such large quantities that the price is low, the economic importance of the laborers producing them will be small. Since the total payments received for these simply produced commodities go to labor in the form of wages, it can easily be seen that the worker receives high wages when his labor results in goods that are very scarce and much wanted, whereas he can command only low wages when the goods he is producing are quite plentiful in relation to the demand.

TABLE 23. TOTAL CROP AND MARGINAL PRODUCT OF LABOR
(Varying quantities of labor are used on one-acre plots of land of three different grades)

Units of Labor (in days of work)	First-Grade Land		Second-Grade Land		Third-Grade Land	
	Total Product (bu.)	Marginal Product (bu.)	Total Product (bu.)	Marginal Product (bu.)	Total Product (bu.)	Marginal Product (bu.)
1	25		20		15	
2	45	20	35	15	25	10
3	60	15	45	10	30	5
4	70	10	50	5		
5	75	5				

Wages Under More Usual Conditions of Production. Conditions of production are usually much more complicated than has been suggested in the illustration that we have just used. Actual examples of production in which the total product goes to laborers in the form of wages are to be found ordinarily only in sparsely settled areas where primitive methods of production are still current. For a dense population means almost certainly a charge for the use of land; and production, unless it is of a primitive, direct type, requires the use of capital, and this in turn is not to be had without payment.

Table 23 gives some hypothetical figures which serve to show how wages are measured in an economic society in which rent is charged for the use of land. The problem of interest will be reserved for discussion in the following chapter.

In this table we assume that the amount of capital used is small, and that the little which is needed is supplied by the laborer himself. A farm laborer, for example, might be expected to provide himself with a hoe

with which to do a part of his work, though some units of labor would probably be employed without the use of any capital whatsoever. If potatoes are being grown, one unit of labor (a day's work of a given grade) with a hoe might suffice, so far as capital is concerned. If a second unit of labor is used, it could consist of unaided hand work, such as weed-pulling. A third unit might be expended in picking stones, a fourth in killing potato bugs, and a fifth in a second hand-weeding later in the season. Capital therefore plays so small a part in the present example that we shall not consider it at all, but shall take it for granted that the only payments to be made are for the use of land and labor. All of our labor units, of course, are exactly alike, each consisting of a day's work of a given grade.

Because of the workings of diminishing returns, the productive importance of labor is less when many units of labor are used with a given quantity of land (or capital) than when few units are used. The productive importance of a unit may be determined at any time by removing one unit temporarily, noting the loss in total product that results, and ascertaining the value of the amount lost. The illustration in Table 23 suggests that land is so scarce that it is cultivated intensively, with considerable labor being used on each acre. The greater the number of labor units used (if the other productive agents remain unchanged in quantity), the smaller will be the marginal product of labor. Under competition, labor will continue to be applied up to the point at which its cost is equal to the value of its marginal product.

Quality and Productivity. The table shows clearly that a small marginal product does not necessarily result from inferiority of the labor unit. In many cases, it is attributable rather to the inferiority or scarcity of the *other factors* of production. A third unit of labor expended on first-grade land would have, according to our table, a marginal product of 15 bushels; but if a third unit were used on second-grade land its marginal product would be only 10 bushels; and if applied to third-grade land it would have a marginal product of but 5 bushels. In each of these three instances the labor units are identical, but in the case of second-grade and third-grade land they would have inferior productive agents to work with, and consequently their marginal product would be small. The effect would be similar if, in a manufacturing enterprise, the capital used (machinery and tools) differed in quality; for those labor units that were compelled to work with poor capital would be less productive than the labor units that were coupled with high-grade modern capital.

Scarcity and Productivity. Moreover, if land and capital were uniform in quality and of very high grade, but were so limited in quantity that they had to be used sparingly, while at the same time labor was available in large quantities, the marginal product of labor would be smaller when many units of labor were used than when few were used. We see, then,

that when the quantity of labor of a given kind is large in relation to the quantities of the other factors, labor has but a small marginal product. In Table 23 the marginal product of labor is only 5 bushels *because* labor is so plentiful, there being twelve units available for use on these three acres of land. If there were only nine units of labor to be had, the marginal product of labor would be 10 bushels, though the labor would not be of any better quality than when it had a marginal product of 5 bushels. It is evident, then, that the quantity of labor affects greatly the wage that each unit can command, since labor's marginal product depends largely upon the quantity of labor that is available for use if the quantities of the other agents of production remain unchanged.

Uniformity and Differences in Wages. The productivity of the last unit of labor to be employed measures its remuneration, and all labor units of this type and grade will receive the same wage, in accordance with the Law of One Price. The equalization of the marginal product of a given grade of labor throughout the entire market is shown in the "Marginal Product" columns of Table 23, and also in Fig. 32 (though the marginal product in this diagram is not that of labor alone, but of labor and capital combined).

There are many types and grades of labor, as there are many kinds of land, and it is often possible to find numerous types of labor at work at one time on the making of a single commodity. In a modern manufacturing plant, such as a clothing factory, there are dozens of kinds of workers, and probably almost as many different wage rates. In a later section of the present chapter we shall discuss differences in wages from the point of view of the supply of the various types and grades of labor. For the present, we may repeat the observation that the wage paid for a unit of labor, of whatever type or grade, tends under competition to approximate the full value of the marginal product of that unit of labor in the long run; and that the marginal product of labor may be ascertained by withdrawing from production a single unit of the labor in question and finding out how much of the total product is lost through its removal.

The "Current Rate" of Wages. It would not be correct to assume that the individual business man determines in this way the wages of his workers. He does not. Instead, as we have already suggested, he pays the current rates of wages for labor of various kinds—rates that are determined by conditions of supply and demand as they relate to each of the many kinds of labor used in industry. But these current rates represent also the estimates of business men in general as to the marginal productivity (or "worth in production") of labor. We saw in Chapter 18 that it pays the enterpriser to employ a productive agent up to the point at which the value of the additional product resulting from the use of a unit of the agent is just sufficient to cover the cost of the unit. Consequently, business men are continually experimenting and estimating, trying out various

combinations of various agents. Thus they learn a great deal about the marginal productivity of the several agents, and by their competitive bidding they establish rates of wages which may be said to approximate the estimated value of labor's marginal product.

Competition in Wage Determination. We are not arguing that an enterpriser would be unwilling to pay less for a unit of labor than the full value of its marginal product. But free competition among employers tends to make it impossible for him to do so. If the value of the marginal product of a unit of labor is \$1.00, an employer would doubtless be delighted to pay only 80 cents in wages and reap 20 cents in additional gain. But in a situation such as this, some other employer, noting the large margin of gain and considering that 15 cents of gain is better than none at all, will almost certainly offer a higher wage, say, 85 cents, and still another will bid 90 cents, and so on until this margin of gain is wholly, or at least virtually, wiped out. So long as an enterpriser can gain anything at all by taking on additional workers, it is reasonable to suppose that he will do so. This is particularly true in an industrial era in which small unit profits and a large volume of business are the watchword of many enterprisers.

Supply and Demand in Wage Determination. We have surely said enough to indicate that the demand for labor is closely related to the marginal productivity of labor. Labor is wanted by enterprisers because it is productive, and under competition wages cannot be far above or far below the value of the marginal product. But the marginal productivity of labor, like that of land, depends upon the equilibrium of supply and demand, for the marginal productivity, and the wage, of a certain kind of labor will be low if that kind of labor is very plentiful; and the marginal productivity and wage will be high if the labor is very scarce.

The quantity of labor of a given type is not fixed, as the quantity of land is fixed. That is to say, the quantity of land is permanently fixed (except for quite unimportant changes), but the quantity of labor may be increased or decreased over a considerable period of time. It does take considerable time, however, to effect an appreciable change in the labor supply. The quantity of labor in general depends upon the size of the population. The quantity of labor of a particular kind depends upon the number of persons who are able and willing to perform the required work. This number, in turn, is affected by native ability, the cost of training, the mobility of labor, and several other factors that we shall examine later in the present chapter.

A Summary of Wage Determination. In the next chapter we shall show that established standards of living do a great deal to affect wages in the long run, through their influence upon population and hence upon the quantity of labor. This fact does not in any way invalidate our statement that the demand for labor is based upon marginal productivity. The truth

is, of course, that both the supply of and the demand for labor are responsible for determining the wages in a particular occupation.

The standard of living is simply one of several factors which affect the supply of labor and consequently affect wages. Insistence upon a certain standard of living limits the size of the population, and this and other factors affect the quantity of a given kind of labor. On the side of demand, marginal productivity is of the utmost importance, since the value of the marginal product limits the amount enterprisers can pay for labor. Thus, the economic importance of a unit of labor is measured by the marginal productivity of that type of labor; and marginal productivity, as we have seen, is high or low, depending upon the quantity of labor. While it is true that enterprisers cannot afford to pay more for labor than the value of the marginal product, it is equally true that competition among enterprisers for the services of workers tends to keep the wage up to approximately this amount. In the absence of strict competition, marginal productivity will still measure the *maximum* that enterprisers will pay, while the *minimum* that workers can accept (and might conceivably be forced to accept) will be a bare subsistence wage. It is evident, then, that wages might be much lower than marginal productivity under non-competitive conditions.

WAGES AS AN EXAMPLE OF PRICE DETERMINATION

Wages, like rent, may be treated as a problem in price determination. In Fig. 34 we have a demand curve, DD, indicating the quantities of labor which employers would hire at various prices; and a supply curve, SS, showing the quantities of labor that workers would provide at the several prices. Of the demand curve, we need say nothing further than that it is based upon the marginal productivity of labor of the particular type that is being considered. The supply curve is one which indicates that the condition is almost, but not quite, one of fixed supply. Labor is a perishable good, in the sense that it must be used day by day or be wasted; that is to say, it cannot, like material goods, be stored up over a period of time and then sold in large quantity. Since most workers are anxious to make the most of the one thing they have for sale—labor—and since, moreover, but few can afford to be idle for any appreciable period of time when work is available, we are not far from the truth in suggesting that most labor will sell at whatever price can be had for it, provided only the price is not ridiculously low. If, however, the figure is substantially lower than the wage which has recently been paid, and to which the workers have become accustomed, some of the workers may decide to hold out for the customary wage and refuse to work unless it is forthcoming.

In Fig. 34 we have suggested that 24,000 workers would, if necessary, sell their services for as little as 50 cents a day per worker, and that the

total number of workers of this kind, 26,000, would go to work if the wage went as high as \$5 a day. The figures are hypothetical, of course, but it is certainly accurate to say that a large percentage of the workers of a given kind would work even at very low wages, that the number would increase if the wage were somewhat higher, and would be still further enlarged if an unusually high wage were offered. For while there are many workers who must accept jobs at whatever wages they can get, there are others who consider themselves "semi-retired" but cannot resist the lure of what seem to them to be exceptional wages, and still others who might be drawn from other walks of life by wages that were phenomenally high, as was the case in some occupations during World War II.

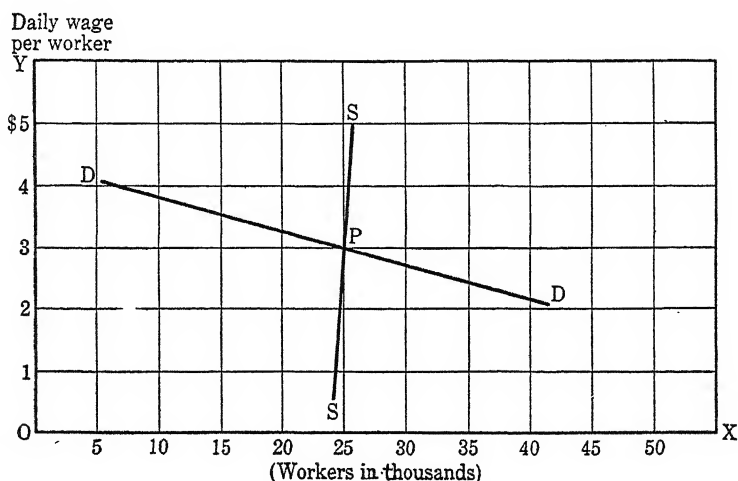


FIG. 34. THE DETERMINATION OF WAGES FOR A PARTICULAR KIND OF LABOR UNDER SHORT-RUN COMPETITIVE CONDITIONS

We have been dealing, of course, with wages in the short run. Of wages in the long run, there is not much of a definite nature to be said. It is probably true that some families would be larger, and consequently the total quantity of labor would be larger, if wages over a long period of time were high than if they were low. But it would be incorrect to say that there is a direct relationship between wages and the size of families, in the sense that the prospect of high wages leads parents to have many children in order to secure these high wages. On the other hand, as we have already said, the size of families is sometimes limited to the number which parents feel they can rear properly with the income that is available, and to the number, moreover, that can probably find sufficiently remunerative employment when the time comes for them to earn their own living.

What we have in mind, of course, is that the "production" of human beings (from whom we get our stock of labor) is so far from being strictly

a money-making matter that we have no assurance that, in the long run, the payment of high wages throughout our economic society will have the effect of increasing the birth rate and consequently the number of workers. And if this is true of wages in general, it is equally true of wages in a given occupation. Indeed, the factors which influence the quantity of labor in the long run are so many, and are so largely incalculable, that economists have not been able to work out a satisfactory theory of *long-run* labor supply.

DIFFERENCES IN WAGES

We may now note some variations in wages between workers of the same type in different countries, and between those engaging in different occupations in the same geographical area.

Wages in Different Countries. There does not appear to be any tendency toward a general level of wages, in the sense of an equalization in the wages paid to those engaged in different occupations. For reasons which we shall discuss presently, wages in some occupations are low and those in others are high; and there is some evidence that these wage differences are increasing rather than diminishing. However, there is such a thing as a wage level in one region being higher than the wage level of another region. For example, real wages are considerably higher in the United States than in England. This does not mean that the worst-paid workers in this country have larger incomes than the best-paid in England, but it does mean that, trade for trade, American labor enjoys higher real wages than British labor.

In both instances the wages tend to approximate the marginal productivity of labor. But the greater marginal productivity of American labor, it must be remembered, is not necessarily an indication of greater ability or a larger expenditure of energy on the part of the workers of this country. It merely means that, conditions being what they are, the withdrawal of an American laborer from production brings a greater economic loss than the withdrawal of a British laborer engaged in a similar line of work.¹ In general, when there is a great abundance of land and capital that can be combined with each available unit of labor, wages will be high; when labor is plentiful, and land and capital are relatively scarce, wages will be low. This statement provides the chief explanation of America's superiority in wages.

Competition Among Laborers in Different Regions. Since wages in general are higher in the United States than in other countries, we might expect to find a continuous stream of workers leaving those countries and migrating to America to take advantage of the greater economic oppor-

¹ Some specific reasons for wage differences of this kind are mentioned in the following chapter.

tunities that this newer region has to offer. Our statistics of immigration show that this sort of movement has been very common. In each of a number of years, more than a million immigrants have come annually to this country, and this influx has doubtless done something in the way of equalizing wages between this and other countries.

But there are obstacles to mobility of labor, and therefore to competition among workers of different countries. One barrier to immigration into the United States is the stringent legislation that has been adopted in recent years, by reason of which the total number of immigrants admitted annually by quota to this country from the eastern hemisphere is now limited to 150,000. This is a way of lessening competition and thus establishing a relatively permanent difference between wages in this country and other countries. But in addition to this form of interference with world competition among wage earners, there are other forces which tend to keep human beings in those parts of the world in which they have been born and reared. Among the deterrents to mobility of labor are the love of native land, the disinclination to leave relatives and friends, the cost involved in moving oneself and family to a distant country, and the element of uncertainty that "makes us rather bear those ills we have than fly to others that we know not of."

Even within a single country, such as the United States, there is much less movement on the part of labor than one might expect to see; and as a consequence there are sometimes very considerable differences between wages in the same trades in two or more states. For example, the wage rate for carpenters, in Atlanta, some years ago, was 80 cents an hour; in Boston, \$1.25; and in New York City, \$1.50.² But it must always be remembered, in comparing money wages, that the cost of living also varies as between cities; and, moreover, that terms designating trades (such as "carpenter," "machinist," and so on) may be interpreted differently in different parts of the country.

Wages in Different Groups and Occupations. Differences such as those just noted should make us wary of attempting to speak with exactness about differences in real wages. However, we have sufficient data of a reliable nature to enable us to make certain observations without running any great risk of inaccuracy. We know, for example, that some types of workers are paid handsomely, while others receive a relatively small wage. We know, also, that there is little or no competition between the members of some wage groups and those of others. And there is, moreover, a tendency for certain kinds of wage differences to become stratified, and to be perpetuated not only over years but over generations as well. To problems of this kind we shall give a good deal of attention in Chapter 21.

² The abnormal conditions of demand for labor during and immediately following World War II increased these pre-war wages greatly, but did not destroy the wage differentials as between different sections of the country.

Seasonal Occupations and Cost of Training. Some occupational wage differences are more apparent than real. For example, they may represent differences in *wage rates* rather than in yearly earnings. The wages of miners, clothing workers, and actors may appear to be high on the basis of hourly or weekly earnings, but are not so attractive when it is remembered that these occupations are seasonal in character, sometimes providing only thirty or forty weeks of work out of the fifty-two. It may seem that a plumber receives unduly large wages; but he is forced, in order to qualify for his task, to serve a long apprenticeship at extremely low wages, and the high income ultimately received is, in part at least, a payment for those years of apprenticeship.

Indeed, whenever considerable expense is incurred in connection with the development of skill in a given trade, workers will demand reimbursement for these outlays, or compensation for loss of wages during apprenticeship, in the form of incomes higher than those received in occupations which one may enter without making a sacrifice for training. If it were found that extra large wages were not forthcoming in the trades involving extensive training, fewer and yet fewer workers would enter those trades, the number of workers available for such work would decline, and wages would rise. Hence, we see the significance of the quantity of labor as a factor in determining wages.

Psychic Income in Attractive Callings. It is frequently said of teachers and members of certain other professions that, in view of the time and money that they expend for professional training, they are very poorly paid. A teacher of economics can scarcely be expected to discourage the spread of ideas of this kind; and yet it should be stated in all fairness that teachers' salaries are not so low as at first sight they appear to be, for teachers receive a considerable income, wholly apart from financial remuneration.

The college teacher may not receive a large money wage, but he enjoys what is, to many teachers, even more important than a high monetary return. His hours of actual teaching are few; his vacations are long, and, if necessity presses too hard upon him, they can be converted into cold cash. He has leisure for self-development, the stimulus provided by association with fellow teachers in various fields of learning, and the satisfaction of contributing something to the intellectual life of his students. Advantages such as these, which make a particular occupation attractive, are often called *psychic income*.

Psychic income, though not measurable in terms of money, is often quite as acceptable as money income. Military leaders are paid largely in fame and titles; actors in applause; public officials in prestige; and scientists in the satisfaction of having increased the sum total of human knowledge. Ordinarily, of course, one's material needs must be reasonably well provided for before one is in a fit position to enjoy psychic income.

Hazardous and Disagreeable Occupations. Some occupations, then, bring rather small money payments because they present features so attractive that high wage payments are unnecessary. Other jobs, because they involve working at dangerous tasks, command wages that sometimes appear to be disproportionate to the skill demanded. Structural steel workers, steeple jacks, and others who engage in hazardous and spectacular work are not uncommonly paid higher wages than those equally skilled whose occupations are less dangerous. The spectacular element is worth emphasizing, for there are many occupations that collect a heavy toll in accidents and industrial disease and yet offer to workers no extra pay by way of compensation for the risks that they take. A worker who runs a risk of sudden death in following his occupation stands more chance of being paid for the extra risk than does the worker whose job results in slow, but almost certain, death through industrial poisoning.

It is said by some writers that workers will refuse to take jobs that are hazardous or especially disagreeable, without the incentive of unusually high wages. This statement, if true at all, is true only to a very limited extent. Certainly, it has yet to be proved that industrial accidents and industrial disease are more common among the well-paid than among those of smaller incomes. It appears, rather, that the reverse is true; that most of the dangerous and disagreeable tasks in our modern economic society are performed by persons who lack bargaining power, and who, rather than be without work, accept whatever wages and working conditions are offered them. It is certainly correct to say that low wages and dangerous or disagreeable work often go together.

Wages are a payment made for the use of labor.

Money wages are wages expressed in terms of money.

Real wages are wages expressed in terms of economic goods.

1. Define "wages."
2. What is the difference between "money wages" and "real wages"?
3. Money wages "are sometimes very deceptive." Explain.
4. Why is it desirable, in dealing with the distribution of income, to think of wages as referring to the average yearly real wages of labor?
5. "The size of the wage paid to labor does not necessarily bear any relation to the amount of energy the worker has exerted." Explain.
6. "Because of the workings of diminishing returns, the productive importance of labor declines as more and more units of labor are used with a given quantity of land (or capital)." What effect does this decline have on wages?

7. "Labor will continue to be applied in any economic enterprise up to the point at which the cost of the labor is equal to the value of its marginal product." Why?
8. Labor of a given quality sometimes has small marginal productivity and at other times large marginal productivity. Explain.
9. What, if anything, has scarcity of labor to do with its marginal productivity?
10. Is it certain that, under perfect competition, every unit of a given kind of labor will be paid for at the same rate as the marginal unit? If so, why is this true?
11. "The wage paid for a unit of labor, of whatever type or grade, tends to approximate the full value of the marginal product of that unit of labor." Why may this wage not be higher or lower than the value of the marginal product?
12. How may one determine the marginal product of a given type of labor?
13. "Marginal productivity does not *determine* wages, although wages and marginal productivity are equal." What, then, does determine wages?
14. How do you account for the fact that wages in general are higher in the United States than in England?
15. Why does not the movement of labor from place to place wipe out differences in wages?
16. It is entirely possible for carpenters to receive 80 cents an hour in Atlanta, \$1.25 in Boston, and \$1.50 in New York City, and yet be equally well off in these three cities. Explain.
17. What is the relationship between wages, on the one hand, and the seasonal nature of some occupations and the cost of training, on the other?
18. Explain the manner in which psychic income may have an effect upon money wages.
19. Would you expect persons engaged in hazardous and disagreeable occupations to receive unusually high wages because their tasks are hazardous and disagreeable? Is it a fact that they do receive unusually high wages?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 18.

Wages and Population

IN A SOCIETY IN WHICH PRACTICALLY ALL COMMODITIES AND SERVICES ARE economic and not free goods, the question of purchasing power is of paramount importance. Between riches and poverty there is a great gulf fixed—the rich have much purchasing power, the poor virtually none. Those who have much may, like Dives, fare sumptuously every day, but those who have none get only the crumbs that fall from the rich man's table. The purchasing power received by industrial workers comes almost wholly in the form of wages. It is largely on this account that labor seeks always to raise wages, and clings tenaciously to wage levels already attained whenever reductions are threatened. For the laborer is no less anxious than the business enterpriser to have what he considers the good things of life.

The Relation of Population to Wages. One of the most serious problems of labor is the prevalence of low wages among many classes of workers. Wages are paid for the use of labor, as a price is paid for any commodity, on the basis of scarcity. If, then, wages are low, the supply of labor must be relatively plentiful. This fact suggests the possibility of regulating wages by affecting the supply of labor through the control of population growth. It is this relationship between population and wages that leads to the problem of low wages, which we shall examine in the present chapter.

Per Capita Income. It is highly desirable for a country to have a large national income, since it is from this that the owners of the productive agents must receive their payments. By a *large* income we mean, of course, one which, when divided among those who share in its distribution, provides a large per capita income. The national income of the United States in the "good times" which prevailed in 1929¹ was roughly \$90,000,000,000, or about \$750 per capita. If, with this national income, our population had been only 90 millions instead of 120 millions, we should obviously have been better off economically because we should then have had a per capita income of \$1000. If, on the other hand, our

¹ We cite figures for 1929 because that year brought the people of the United States the largest national income they had ever enjoyed, prior to World War II, in time of peace. Whether we shall be able to maintain the enormous output of 1946 (totaling approximately \$165,000,000,000) cannot be predicted with confidence as these lines are written.

population had been 180 millions, the same total national income would have resulted in a per capita income of only \$500. It is scarcely necessary to explain that a per capita income of (say) \$750 does not mean that every man, woman, and child in the country actually receives this amount annually. Owing to the concentration of wealth and our method of distributing income, a relatively small number of Americans receive extremely large incomes (which, however, have been quite heavily taxed in recent years); the vast majority have only enough to buy a satisfactory standard of living, and many are definitely poverty-stricken.

No country, then, can provide prosperity for its people if the population is so great or its national income so meager that its per capita income is small. Even a very large per capita income, as we have just noted, is no guaranty of *general* economic welfare, since per capita income is merely an average, in which may be concealed dizzy heights of individual prosperity and abysmal depths of individual poverty. In every capitalistic country we find wide differences in individual wages for personal services; in the United States, for example, wages range all the way from the fifteen-hundred-dollar average annual wage paid in American manufacturing² to the half-million dollars or so paid to motion-picture stars or banking experts. These wage differences are, again, related to numbers. The number of persons available for work in manufacturing plants is large in relation to the demand for their services, and as a consequence their wage is low; the number of capable actors and expert bankers is small in comparison with demand, and they are able on that account to command high wages.

General and Individual Wages. A statement to the effect that the general level of prices is high or low tells us nothing about a specific individual price that enters into the calculation of the price index number. In like manner, the existence of a high or low level of real wages within a country does not indicate how persons engaged in particular lines of work are faring. And just as we are more often interested in the price of a specified grade of bread, calico, or coal, than in general commodity prices, so when it comes to wages we pay more attention to the earning capacity of bakers, weavers, or miners than to per capita incomes. It is on his own wages, and not on per capita income, that the worker and his family must live. It is individual real wages, therefore—the wages that they themselves receive—about which the workers are concerned; and these are the wages they have in mind when they insist on wage increases or resist wage cuts.

² The figure was lower than this in 1927 and 1937, according to the National Industrial Conference Board, but substantially higher (perhaps as much as \$2500) in the inflation year of 1947. In 1945, a wartime year of enormous economic activity, 47 per cent of the 46 million families in the United States had a *total family income* of \$2000 or less (*Report for the Business Executive*, July 25, 1946, p. 4).

POPULATION, THE SUPPLY OF LABOR, AND WAGES

The "Optimum Population." Labor is definitely tied up with human beings, and the quantity of labor is dependent chiefly upon the size of the population. The labor supply is affected, also, by the proportion of the population that is gainfully employed, the amount of time the workers give to productive effort, and the intensity with which they work; but these are matters which, for considerable periods of time, are fixed by custom or even by union regulation. The amount of time expended in work and the intensity of effort being what they are, we may generalize to the extent of saying that a large population means a large quantity of labor available for use in productive enterprise. Whether the population is of a desirable size economically depends upon whether the land and capital with which the "gainfully employed" carry on work are adequate in both quantity and quality. From the economic point of view, the best or *optimum* population is that which results in the production of the greatest per capita output. It is large output *per unit of population*, and not per unit of land or capital, that makes for economic welfare. Some of the most productive land in the world is that which is cultivated very intensively by the people of China and India. But so much labor is lavished upon its cultivation that the product, though large per unit of land, is so small per unit of labor that those who farm it are seldom free from the threat of starvation. Since the goal of production is to provide human beings with commodities and services, production is (from the social point of view) most successfully carried on when per capita income is at its maximum, if only this income is distributed in a socially desirable way.

Labor of Specific Kinds. But we must consider specific kinds of labor, and not labor in general, if we are to understand the relationship between population and the supply of labor. It is obvious that wages in a given trade, say in plumbing, are affected not by the quantity of labor in general, but only, on the side of supply, by the number of plumbers in the market. Common laborers do not compete with plumbers, plumbers with architects, or architects with lawyers, in seeking remunerative employment. It is the number of plumbers available, in relation to the demand for their services, that fixes wages in the plumbing trade. If plumbers are relatively plentiful, their eagerness to get jobs will lead them to bid against one another, and wages will be pulled down; if, on the other hand, plumbers are relatively scarce, the competitive bids for their services will have the effect of raising their wages.

Since labor is a perishable commodity which goes to waste unless it is used day by day, and since in most wage groups the workers cannot afford to indulge in the luxury of voluntary idleness, the amount of labor of a given kind that is offered for sale at any given time is ordinarily the total quantity in existence in the market in question. There are occasional

exceptions, of course, as in the case of strikes, but it is safe to say that there is seldom much labor withheld from the market. This being true, the owner of labor (who is the worker himself) is frequently in the uncomfortable position of the owner of a perishable material commodity, such as strawberries or fresh fish—that is, he is obliged to take whatever he can get for his wares, for if in the absence of high bids he refuses to sell at a low price, his commodity perishes and he gets nothing at all for it.

Shifting Labor from Market to Market. If, over a considerable length of time, workers in a certain trade find it impossible to command a satisfactory wage, we might suppose that they would realize that their line of work was overcrowded and move off promptly to more lucrative fields. But this is more easily said than done. In “normal” times our bituminous coal mines are notoriously overmanned. If some of these laborers should give up mining and go into less crowded industries, this action not only would bring higher wages to those who moved but would relieve the situation for those who remained, and thus be beneficial to both. But where shall these mine laborers go in search of larger opportunities—where are the less crowded industries to which they could move? Here, indeed, is the crux of the problem, for it is difficult, if not impossible, to shift them about so that their lot will be improved. They might conceivably, with some slight training, become farm laborers, but there is normally an abundance of such workers, as is indicated by their low wages. The same is true of common labor in the steel industry, in construction work, and so on.

The truth of the matter is that common labor is ordinarily so plentiful throughout industry in general that there is little to be gained by moving workers of this kind from place to place. The most that could be accomplished by this procedure would be to bring about an equalization of wages among common laborers throughout industry as a whole, and this process of equalization has been going on for so many years that it can probably be carried but little further. Moreover, any gain that some of the laborers made would be at the expense of others; a movement of laborers from mines to farms, for example, would pull down the wages of farm hands by increasing their numbers and thus changing the proportions of land, labor, and capital to the disadvantage of labor. Whatever might be done in the way of shifting common labor would result, therefore, in equalizing wages among the workers of this group; and any wage changes that might be made in this way would doubtless be very slight. It should be noted that changes that did occur would be the result of changing the supply of labor of this kind in the several markets affected, reducing it slightly at one point only to increase it at another.

Non-Competing Groups. But why should not workers, if they are dissatisfied with their present wages, change over to new occupations which are better paid? The answer is that a limited number of the more ambitious or more fortunate do manage to work their way from poorly

paid jobs into positions that command high wages, but to the great majority the obstacles to such progress appear to be insuperable. The day laborer at \$5 a day would like to be a carpenter at \$12, but cannot afford to serve the long apprenticeship without which one is not permitted to follow carpentering. The chorus girl at \$50 envies the prima donna her two thousand a week, but has neither the voice nor the personality demanded of a musical comedy star. The grade-school teacher at two thousand a year would like to be a high-school principal at five thousand, but lacks the education and executive ability essential for holding this position. As a consequence of lack of ability or lack of opportunity—and quite often the latter—there is surprisingly little competition for well-paid jobs on the part of those who are poorly paid.

Because of the tendency for workers to “stay put,” once they get into a particular wage class, economists sometimes distinguish among certain broad divisions of wage earners, to which the name “non-competing groups” has been given. Though the classifications made by writers differ considerably, the following list will serve as well as any to show that there is not a free movement of labor from grade to grade:

1. *Common Manual Laborers.* These are our hewers of wood, drawers of water, diggers of ditches, and other workers whose contribution to production lies chiefly in the expenditure of physical strength. They need no special training, and assume no responsibility in their daily work other than doing what they are told to do. Their annual wages, though always low, are highest in early life when they are strongest and most vigorous, and fall off rapidly after middle life is passed.
2. *Semi-Skilled Workers.* Here are found factory workers whose duties consist of tending semi-automatic machines, and also clerical workers filling routine jobs. In this group, moreover, belong such workers as taxicab drivers, whose duties demand an alert mind and the assumption of some responsibility. Sales people of ordinary ability may be included among the semi-skilled. The pay in this group of workers may be slightly higher than that of common labor, or it may at times be lower. But in either case, since the worker does not depend primarily upon physical strength for the performance of his task, he is able to carry on his work at a more advanced age than those in Group 1.
3. *Skilled Workers.* Both native ability and training play a part in this field of activity. Here we find machinists, plumbers, electricians, carpenters, and other skilled craftsmen; expert stenographers, bookkeepers, and other high-grade clerical workers; teachers in the elementary schools; and other types of workers whose tasks require some training and the assumption of considerable responsibility. The corner grocer, the barber, the owner of a shoe

repair shop, and others who conduct small independent businesses may be included. Workers in this class ordinarily command comfortable, but not high, incomes.

4. *Professional Men and Business Managers.* Members of this group, in general, have incomes sufficiently large to buy high standards of living. Here are found physicians, lawyers, accountants, and technical experts of many kinds whose success hinges usually upon the possession of considerable native ability, and professional training covering a period of years. High-grade salesmen, such as those who deal in insurance and securities, may well be included. Here, also, belong many of our business executives.
5. *"Captains of Industry."* This term is used in this connection to designate those who are outstanding figures in the economic world, and who, by reason of their unique abilities—that is, because of the absence of much competition—are able to command phenomenally high wages. In this class are the organizers and directors of "big business," our "wizards of finance," and business managers who are more than ordinarily successful. Here, moreover, because of their extraordinary scarcity, belong some of our famous stars of the stage and screen, champion pugilists, and an occasional lawyer, playwright, and novelist.

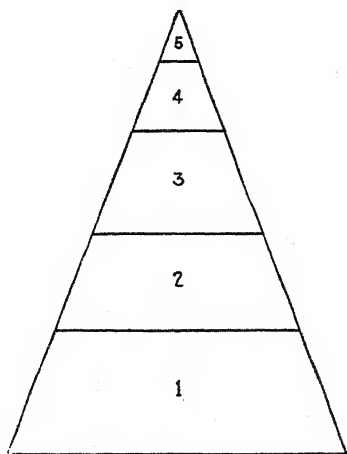


FIG. 35. NON-COMPETING WAGE GROUPS

It is important to note that not only do the incomes in these several groups range from very low wages in Group 1 to astoundingly high wages in Group 5, but the incomes vary *inversely* with the numbers of workers in the groups. That is to say, the members of Group 1, the largest of the five classes, receive the smallest individual wages, while those in Group 5, the smallest group in the list, enjoy by far the largest individual wages.

The situation is frequently illustrated by use of a pyramid, as in Fig. 35, the size of the section given to each group indicating roughly the abundance or scarcity of workers in the group, and its height from the base line the position which its members occupy in the wage scale. This inverse relationship is not to be thought of as a mere coincidence. All that we know of wage determination leads to the conclusion that it is distinctly a cause-and-effect relationship. Wages are low in Group 1 *because* there are so many workers in relation to the number of jobs available for them; wages are high in Group 5 *because* its members are few in comparison with the demand for their services.

The existence of non-competing groups is believed to explain many of the differences in wages that may be observed on every hand. If all workers were alike, these differences in wages would promptly be wiped out by the force of competition. If any differences remained, and wages in some occupations were higher than in others, the extra pay would be merely compensation for the unpleasantness or riskiness of certain lines of work, and not the result of scarcity. But workers are not alike. They differ in native ability and training, as we have already said, and their differences prevent any considerable amount of competition between groups. It requires no argument to show that common manual laborers do not compete with great financiers. It is less clear, perhaps, that members of Group 1 are unlikely to bid for jobs wanted by those in Group 2; but in the main there is little competition between any two of the five groups. Occasionally, manual laborers may wander from Group 1, and, getting into Group 2 and being capable of doing semi-skilled work, bid against members of the second group, and thus bring down wages slightly; and semi-skilled workers from Group 2, having pursued a course of training, may elevate themselves into Group 3 and offer some competition to skilled workers there. But though this sort of thing may take place occasionally, it is safe to say that there is relatively little movement of workers from group to group. The difficulties to be overcome in climbing into a higher class are too great for any save the exceptional man.

Permanent Stratification of Groups. Moreover, there is a tendency for non-competing groups to be self-perpetuating. It would seem that parents, knowing from experience the inconvenience that goes with small incomes, would seek to get their children into the higher wage groups; or that the children themselves, trained in the stern school of poverty, would strike out for occupations more gainful than those in which their parents served. But the odds, alas, are heavily against any such advancement, so far as most workers are concerned. It is possible, indeed, but not probable, that a boy will rise from his father's wage class into one paying a larger income. The difficulties may be those of heredity or environment, or both. We cannot be sure that the son will start life with greater native endowments than his father. But even if he does, there is the troublesome problem of secur-

ing training for the higher grade of work. He may, it is true, enjoy greater educational advantages than his father has had; but then, again, he may not.

What one does in the way of securing an education depends, probably more often than not, upon the environment in which one is placed. Environmental influences are scarcely calculated, in the low-wage groups, to spur one on to great deeds. The son of a manual laborer, even though he has in him the making of a skilled electrician, a great lawyer, or a merchant prince, is unlikely to receive encouragement from his immediate family and associates to set forth upon one of these careers. Indeed, it is probable that he will never learn of his inborn capacity for greater economic achievement; that he will, on the contrary, promptly get used to the standard of living of his father's wage class, and that, when he reaches man's estate, he will accept a job at "good wages" and continue to hold this job, or a similar one, throughout his working life. There is no way of knowing how much human talent goes to waste from lack of discovery or development, but there can be little doubt that the losses of this kind are enormous.

These are some of the hindrances to a free movement between the various wage groups which provide economic society with the productive agent that we call labor. Because there is no competition worth mentioning between these groups (though there may be a good deal of rivalry for jobs within a given group), wages may be high in one group and low in another, as we have already suggested. Whether they are high or low will depend upon the supply of and demand for labor of the various kinds. High wages are based on the scarcity of labor, and low wages on its abundance. For example, the success of members of Groups 4 and 5 in securing high incomes is due primarily to the limitation of numbers in these fortunate groups. If captains of industry were plentiful instead of scarce, they would receive much lower wages than at present; but, as we have explained, they are free from the competition of workers outside their own group. So long as these various groups are separated one from another, with little opportunity for workers to move from group to group, we shall continue to have wage classes.

The Significance of "Proportionality." We see, therefore, that the quantity of labor is vastly important in the determination of wages. Low wages are the result of what is, for the workers, an unfortunate relationship in the quantities of land, labor, and capital. If labor should be reduced in quantity, land and capital remaining unchanged, or if land and capital should be made more plentiful without a corresponding increase in the quantity of labor, labor would become relatively more important and could claim and secure for itself a larger share of the product—that is, a larger wage. Practically all that has been said up to this point has been intended to emphasize the fact that wages are governed by the relationship between the quantity of labor, on the one hand, and the quantity of land and

capital, on the other. If, then, low wages are to be raised, the remedy lies in making labor scarce or land and capital more plentiful. Since the workers can do but little in the way of bringing more land and capital into productive use, they might do well to concentrate upon the control of labor, with the thought of reducing the quantity available for productive enterprise, thus increasing the marginal productivity of labor and the price that is paid for its use. The quantity of labor may be controlled by regulating the birth rate or immigration, or both; and to a consideration of these methods of control we now turn our attention.

WAGES AND THE BIRTH RATE

Population and Subsistence. "Populations tend to increase as aggregate wealth increases and tend to decline in numbers as standards of living rise," says the author of an important work on the theory of population.³ The first half of this statement has long been understood, but the second is a development of modern times. Adam Smith, and even earlier English writers on economics, regarded a large population as the sign of a nation's material greatness, since they believed that the population of a nation was bound to expand with every growth in productive capacity. "The most decisive mark of the prosperity of any country is the increase in the number of inhabitants," wrote Adam Smith in his *Wealth of Nations* in 1776; and further, "Every species of animals naturally multiplies in proportion to the means of their subsistence and no species can ever multiply beyond it."

We have here the central idea of the Subsistence Theory of Wages, which for a time enjoyed wide popularity among economists. This theory recognized the fact that labor could be had only if provision were made for the maintenance of the laborers. This meant that the workers must receive, in exchange for their labor, a certain minimum of food, clothing, and shelter, in order to keep them alive and in condition to work. It was held, then, that wages tended to be fixed at that figure which would provide the worker with a bare subsistence for himself and his family. It was supposed that if wages were to rise so that they were more than adequate for maintenance at this very low level, the natural tendency for human beings to be fruitful and multiply would cause the worker to have more and more children. In this way, whatever gains might be made in wages would always be wiped out by the increased costs of supporting a larger family, and the standard of living—that of bare subsistence—would remain unchanged.

Population and Rising Standards of Living. From past experience, we have every reason to believe that populations do tend to increase as wealth increases, but not always at so rapid a pace. From 1800 to 1900, a

³ Ezra Bowen, *An Hypothesis of Population Growth*, New York, Columbia University Press, 1931, p. 14.

period in which improved methods of agriculture and manufacture were flooding the world with commodities of all kinds, the population of Europe rose from 175,000,000 to 390,000,000. But this growth, great as it was, was not sufficient to keep up with the increased production of goods; and as a consequence the nineteenth century witnessed great improvements in the standards of living of the masses of workers. It is not inevitable, therefore, as the older economists believed, that wages should be held down to a subsistence level. Whenever increases in production outstrip increases in population, the per capita income rises and there is at least a possibility that the working classes will be able to command higher real wages than before. If every section of an economic society has shared in the population increase, and in exact proportion to its previous members, the larger total income resulting from improved production should provide higher real incomes for all. Of course, it would be still better, so far as standards of living are concerned, to have an increase in production while the population remained stationary. "If there had been no increase in population during the last one hundred and fifty years," wrote Professor Ely early in the century, "the marginal productivity of labor would (if, nevertheless, modern methods of production had been developed) have been much higher than it is, and wages would have been correspondingly higher than they are."

A little observation shows quite conclusively that many parents refuse to have families of such size as will hold them down to a subsistence standard of living. It can scarcely be regarded as pure chance that the families of the well-to-do are usually small, while those of the poor are usually large. Populations "tend to decline in numbers as standards of living rise," and there is today every indication that numbers are deliberately held down in order that high standards of living may be enjoyed. There is a limit to the number of children that can be well fed, well clothed, well housed, and well educated on a given income. An understanding of this fact, and a belief in quality rather than quantity, appear to be the only rational explanations of the small size of present-day families in the middle and upper classes. Population growth is governed by birth rates and death rates. The spread of sanitation and developments in the science of medicine have reduced the death rates materially in most countries during the past century, but birth rates have declined even more rapidly, largely, no doubt, because of the desire for better standards of living and the spread of information on family limitation. The result is that, though the total population is still increasing, the *rate of increase* is steadily declining. If we recall the fact that "average fecundity among modern, civilized women amounts to a total production of ten to twelve children, while the *actual* average number of children in families of western civilization is less than three,"⁴ we shall need no further evidence that the birth rate is being regulated.

⁴ *Ibid.*, p. 177.

The Effect of Fewer Births upon Wages. In the practice of family limitation, or "voluntary parenthood," say the advocates of birth control, appears to lie a remedy for low wages. The plumber's wage is lower than that of the popular comedian, not because he renders a less useful service but simply because there are more good plumbers than good comedians, in relation to the demand for these two types of labor. It follows that plumbers could make themselves more fully appreciated by reducing their numbers, and that, once the relationship between good plumbing and human welfare was properly understood, they could command higher wages for their labor. But to be effective, the reduction in numbers, instead of taking place among plumbers only, would have to be applied to Group 3 (of Fig. 35) as a whole, and not to just one type of skilled workers within that group. For if plumbers were made so scarce that their wages were abnormally high for members of Group 3, it is probable that other members of the group, or their sons, instead of following the trade of machinist, carpenter, or electrician, would go in for plumbing and thus provide the competition that would pull down the high wages that limited numbers had brought the plumbers. However, if all members of the group were to insist upon higher standards of living, the attainment of which involved having only one or two children instead of three or four, there can be little doubt that the effect of their decision would be felt in the next generation. For if the theory of noncompeting groups is sound, skilled workers would then be scarce, their marginal productivity would be high, and high wages would have to be paid to secure their services.

The attainment of high wages through the limitation of numbers is not so far-fetched as it might, at first thought, appear to be. Indeed, the chief obstacle at present is lack of knowledge on the part of those who would benefit most by the practice of family limitation. They are ignorant, first of all, of the vital part that numbers play in wage determination, and, in the second place, of satisfactory ways of limiting the size of their families to the number of children they can provide for adequately. But these are matters regarding which the general public is becoming better informed all the time, and it is reasonable to suppose that the desire for higher standards of living—for more expensive automobiles, radio sets, fur coats, and the like—that is being built up by high-pressure advertising will gradually lead the workers to adopt the means necessary to the attainment of such standards—that is, the control of numbers. It seems improbable, however, that we shall arrive at the situation, described by a writer of a century ago, in which "more persons will rather dine alone on champagne and chickens than share their roast beef and pudding with a wife and family."⁵ The desire for home life and the parental instinct will doubtless prevent the movement for high standards of living from being carried to

⁵ Quoted in *ibid.*, p. 201.

such extremes. But it is entirely possible that workers may some day refuse to have more children than their wages will provide not only with "roast beef and pudding" and other creature comforts, but also with educational and cultural opportunities such as are now virtually unknown in our lower income groups.

Economic Consequences of Stationary and Decreasing Populations.

The steadily declining rate of population increase, to which we have referred, will if continued bring us eventually to a point at which the birth rate is as low as the death rate, or even lower. We shall then have either a stationary or a decreasing population. Dr. L. I. Dublin, of the Metropolitan Life Insurance Company, in speaking of the situation in this country, says: "The continuation of the present tendency of rapid decline in the birth rate will in all probability result in bringing about a virtually stationary population in the United States by the year 1970. And at that time, under present immigration restrictions, the population of the United States will be approximately 150,000,000." Assuming that we may count on improvements in production continuing for an indefinite period, a stationary population in this country would facilitate the attainment of higher and still higher standards of living with the passage of time. Standards have risen in recent years because production has increased more rapidly than population. If population were stationary, the same increase in production would cause standards of living to rise more rapidly than in the past; and if, as some students of population problems think probable, we should eventually have a decreasing population, these standards would improve at a still faster rate.

WAGES AND IMMIGRATION

Immigration and American Wages. Population and the supply of labor are always influenced by birth rates and death rates, but they are sometimes affected by immigration as well. This is likely to be particularly true in the case of slightly developed countries with an abundance of natural resources. The United States during the past century is an excellent example. The increasing difficulties of making a living in Europe, and the apparently boundless opportunities offered here, drew millions to our shores. From 1820 to 1920, the population of the United States increased by almost 97,000,000 persons, and approximately one-third of this increase was by immigration. Has this influx of foreigners had any effect upon the wages of American workers? There seems to be little doubt that it has. For their coming has added materially to the quantity of labor; and an increase in the quantity of labor, whether it results from births or from immigration, inevitably makes wages lower than they would have been if the supply of labor had remained unchanged. If it is true, as Professor Ely says, that the marginal productivity and wages of

labor have been held down by the growth of population during the past century and a half, then it is equally true that native American wage earners have suffered from the flood of immigration from Europe to the United States. For some thirty or forty years our immigrants were made up chiefly of laborers from southern and southeastern Europe who, by their competition for jobs, have doubtless done much to hold down the wages of common manual labor and semi-skilled workers in this country.

The Restriction of Immigration. In the forty-five-year period from 1900 to 1944, nearly 20 million immigrants were admitted to the United States. Table 24 shows the average number of immigrants for each of nine five-year periods. It will be noted that the average for the ten years from

TABLE 24. IMMIGRATION TO THE UNITED STATES, 1900-1944

(Annual averages for nine 5-year periods)

(Source: Department of Labor, Immigration and Naturalization Service)

Five-Year Period	Annual Average Number of Immigrants for Period
1900-1904	651,024
1905-1909	989,446
1910-1914	1,034,940
1915-1919	234,536
1920-1924	554,520
1925-1929	304,182
1930-1934	85,390
1935-1939	54,485
1940-1944	40,718

1905 to 1914, inclusive, was more than a million a year. Naturally, the workers of this country did not ignore the fact that these additions to the labor supply in America were injurious to their economic interests. There were, as a consequence of the resentment engendered by the competition of these newcomers, many impassioned demands for the restriction of immigration; but it was not until 1921 that legislative measures were adopted limiting materially the number of immigrants that would be admitted annually into this country. The immigration law has since been changed several times; and as matters now stand, a total of only 150,000 immigrants is admitted to the United States each year from countries of the eastern hemisphere, on a quota basis that allots more than two-thirds of this total to England, Ireland, and Germany. Special concessions are made to natives of the western hemisphere, in that immigrants who were born in Canada, Mexico, Cuba, Haiti, the Canal Zone, and the independent countries of Central and South America, together with their wives and children under eighteen, are classified as "non-quota immigrants" and admitted without limit.

Since approximately 100,000 non-quota immigrants enter the United States annually in "normal" times, it might be supposed that immigrants to this country have totaled about 250,000 a year since the passage of this National Origins Act, which became effective in 1929. Table 24 shows that this has not been the case. The greatly reduced number of immigrants from 1930 to 1944 reflects not so much the limitations imposed by our current immigration barriers as (1) the unattractiveness of the United States (with its high cost of living, as compared with other countries) in years of depression, and (2) the restrictions placed upon *emigration* by some of the European governments.

Overpopulation and Migration. When a region becomes so densely populated that the standard of living is unbearably low, the more venturesome members of the group commonly go forth in search of economic opportunities that are not to be found at home. There is evidence that economic considerations have played a large part in practically all great migrations of the past. Certainly it cannot be doubted that the flood of Europeans to the United States during the past century—"the largest movement of immigrants into any country known to history"—was brought about chiefly by the desire to escape from the low standards of living of the Old World and share in the high standards of the New. The high real wages of the United States could not fail to attract the less favored wage earners of Europe. Hence, in the absence of immigration barriers, more than 35,000,000 Europeans migrated to the United States, and an overwhelming majority of these millions became a permanent part of our population and labor supply.

During the greater part of its existence as a nation, the United States has pursued the policy of encouraging immigration. America was to be the land of opportunity, the place of refuge for all oppressed peoples. But there comes a time in the affairs of nations when it seems wise to change policies. This time came, in the case of American immigration, when the workers of this country insisted upon having protection against the swarms of European competitors whose entrance into the United States imperiled "American standards of living." Our present policy is embodied in the National Origins Act, which we sketched briefly above.

The Case for Restriction of Immigration. There are some who question the justice of excluding from the advantages that we enjoy, the people of other nations who would like to share these advantages with us. It is often urged that we should continue to admit the overflow of population from crowded countries. But migration is not a genuine remedy for overpopulation. Italy provides an example of the futility of migration as a solution of the problem of overcrowding. As Benito Mussolini said repeatedly, while at the same time he was urging his people to have larger families, "Italy each year produces an excess of 500,000 men who must in one fashion or another emigrate." If it was necessary for this number

to migrate every year, as Mussolini insisted, it is obvious that finding places for them elsewhere did nothing to raise the low standards of living that overpopulation had brought to Italy. All that this annual migration could do would be to prevent the situation in Italy from getting worse, and it would do this at the expense of the workers of those countries to which the emigrants went. This can scarcely be called a satisfactory solution of the problem of overpopulation; rather, it is what is popularly known as "passing the buck."

The true remedy for overpopulation, like charity, begins at home. Nations that do not want larger populations should not be expected to admit immigrants unless the country that seeks to dispose of its excess is earnestly trying to hold its birth rate down to a figure as low as its death rate. There are many who believe that the goal to be aimed at is the total exclusion of immigration from any country that has an increasing population. If one with a stationary or decreasing population wishes to raise standards of living by relieving the pressure of population upon its resources, it would appear to deserve help in placing some of its people elsewhere. But a nation that has not set its own house in order by controlling its birth rate should be made to understand that it cannot dump its surplus numbers upon countries that have no need for them and do not want them. Labor, in its attempt to raise real wages by the exercise of family limitation, feels amply justified in demanding that its efforts shall not be frustrated by hordes of immigrant workers coming in from countries that give no heed to a socially sound adjustment between population and national resources. Migration is at best a temporary expedient for relieving overpopulation. It is upon the intelligent control of numbers that the world must depend for high per capita incomes; and it is to such control within particular income groups that workers must look for the attainment and maintenance of high wages.

Mobility of Labor and Commodities. Since we shall endorse free trade, or the unobstructed movement of goods between countries, when we discuss the tariff problem,⁶ it may appear inconsistent to advocate the restriction of immigration in the present chapter. If tariff barriers are to be done away with, why not also remove all obstacles to migration? Is not the free flow of labor comparable to the free flow of goods? No, the two are not strictly comparable, at least not in their economic consequences. The removal of tariff barriers would lead to a readjustment of business based on geographical specialization, and business so adjusted would bring more commodities and services to the country formerly "protected," as well as to the countries whose goods had previously been shut out by tariff duties. But the removal of immigration barriers, unless accompanied by population control, would injure some nations by flooding them with millions of immigrants and yet bring no lasting benefit to the countries

⁶ In chap. 40 (vol. 2).

whence these people came. The admission of 500,000 Italian laborers annually to the United States would unquestionably pull down the wages of American workers but would not raise standards of living in Italy, since the places of the half million (if Mussolini's figures were correct) would be filled promptly by Italy's excess of births over deaths. It is quite possible, then, and without inconsistency, for a person interested in high wages for labor to approve of the free movement of goods and at the same time, in the absence of stationary or decreasing population, to oppose the free movement of labor from country to country.

Another question that is sometimes asked in this connection is whether foreign labor does not compete just as severely when it stays at home as when it emigrates. For example, do not Italian workers in Italy, by making goods which sell in competition with American products, pull down the wages of American labor to as great an extent as though they came to the United States and competed directly? Again the answer is in the negative. Obviously, if a high protective tariff is in effect, the Italian goods and therefore the Italian labor will be unable to compete within the American domestic market. Even in the foreign markets from which goods were not artificially excluded, we find that American products made by highly paid labor can be and are sold at as low prices as the products of other countries made by poorly paid workers. Though American wages are high, the workers here, equipped with an abundant supply of land and capital of high quality, turn out goods so efficiently that the labor cost per unit is extremely low. Italian laborers working in Italy with limited quantities of poor equipment are much less productive than American workers, and do not affect the American wage scale; but if transferred to the United States and put to work here, they would offer direct competition to American labor and their presence would tend to pull down wages in this country.

If world-wide free trade were instituted while present immigration barriers were retained, the laborers of all nations would presumably be set to work making goods, in the production of which their respective countries enjoyed a relative advantage. Real wages would probably rise throughout the world, but differences in the wage levels of the various countries would not be wiped out. Wages then, as now, would depend upon the importance of labor in the productive process, and labor's importance, as measured by its marginal productivity, would in turn depend upon the quantity and quality of land, labor, and capital existing in a given country. If Italy and the United States should chance, under free trade, to compete in the manufacture and sale of a particular commodity, the productive advantages of this country would permit the payment of the prevailing high wage for American labor of the kind used and still allow the article to be sold at the same price as the Italian-made goods. If this were not the case, American labor would leave this

particular industry, moving into other lines of work in which similar workers were enjoying better wages, and the industry in question would eventually disappear because of its inability to stand up in the face of Italian competition. We repeat, then, that it is direct competition, and not indirect competition of the kind we have been discussing, that the highly paid wage earners of the United States must guard against.

Conclusion. We have seen that the size of the population plays an important part in the determination of wages through its influence upon the supply of labor in particular wage groups. Since labor is inextricably tied up with human beings, the supply of labor is practically fixed for short periods of time. In the long run, however, wages can be raised by reducing the supply of labor of a given type, if the demand for workers of this kind does not decline equally fast. Through the practice of family limitation, the low-wage groups could raise their real wages in the course of a generation, if at the same time they saw to it that immigration from other countries was stopped. The small families of the middle and upper classes are evidence of the prevalence of birth control. The high standards of living enjoyed by members of these classes indicate that restriction of numbers is rewarded with higher real wages. The solution of the problem of low wages, therefore, appears to many persons to lie in the refusal of parents to have so many children that their income will not provide a reasonably high standard of living for the family. But this remedy cannot readily be made available for those who need it most unless we abolish our legal taboos against instruction in scientific methods of family limitation. Since legislative restrictions of this kind interfere with the reduction or elimination of poverty, the removal of such restrictions is a goal toward which many socially-minded persons are working today.

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1. If we are to get an accurate impression of the social significance of wages, we must deal with *real annual wages*. Why would not *daily money wages* answer the purpose equally well?
 2. The United States has 44 people to the square mile and a per capita wealth of \$3000; Italy has 368 people to the square mile and a per capita wealth amounting to \$833. Do you think it probable that low real wages in Italy and high real wages in the United States are in any way related to density of population and per capita wealth? Explain.
 3. "The per capita income of the United States is \$1000. This means a total income of \$4000 per year for the hypothetical family of four. This amount is sufficient to buy a good standard of living. Therefore, there is no problem of poverty in this country." Analyze this statement, and pass upon its soundness.
 4. "Labor is a commodity, and the price paid for it, like the price of any other commodity, is determined by conditions of supply and demand." Criticize.

5. It is said that wages tend to equal the marginal productivity of labor; and yet a worker may receive different wages in two different years, even though he works just as hard in one year as in the other and turns out precisely the same number of units of product in each of the two years. Explain.
6. Define "optimum population."
7. What is meant by "non-competing wage groups"? How does the existence of such groups bring about differences in wages?
8. What are the factors that prevent a free movement between these so-called non-competing groups?
9. Why do these groups tend to remain *non-competing* even over long periods of time?
10. It is said that "proportionality" enters into the determination of wages. Explain the meaning of this term in this connection.
11. State the Subsistence Theory of Wages.
12. What evidence have we that the Subsistence Theory of Wages is unsound?
13. How are standards of living related to wages?
14. If it is true that wages are paid workers on the basis of their importance to society, how do you account for the fact that garbage collectors, whose services contribute greatly to the maintenance of public health in crowded communities, receive wages that are far lower than those of our comedians, who merely make us laugh?
15. Some years ago, Charlie Chaplin was offered \$650,000 for a weekly radio broadcast of fifteen minutes over a period of twenty-six weeks. The offer, therefore, was at the rate of \$100,000 per hour. Has a wage of this kind anything to do with marginal productivity? Does it bear any relation to population or the supply of labor? Explain.
16. What is Professor Ely's conclusion on the effect of population growth upon American wages during the past century and a half? How does he arrive at this conclusion?
17. What has the United States done to limit the admission of immigrants?
18. Explain how the restriction of immigration, used in connection with the practice of family limitation, is likely to affect wages.
19. Would you expect the effect to be immediate or long deferred in the case of (a) restriction of immigration, and (b) restriction of numbers by birth control?
20. How may a country solve the problem of overpopulation, if denied the privilege of sending its people to other countries?
21. Must not the advocate of free trade, to be consistent, champion also the abolition of immigration barriers?
22. Do English workers, when they remain in England, compete with Americans as seriously as though they came to the United States and found jobs here? Explain.

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Interest

INTEREST IS A PAYMENT FOR THE USE OF SAVINGS, AS RENT AND WAGES ARE payments for the use of land and labor, respectively. Some savings are borrowed from the savers and used in the purchase of consumers' goods; but most of the savings of society today are borrowed by business men, who use them for buying capital, or producers' goods. For this reason, some writers define interest as a payment made for the use of *capital*. We shall hold to the broader definition as stated above, but shall of necessity deal very largely with interest paid for the use of such savings as are invested in capital, since savings of this kind form so large a part of the total savings of every highly industrialized country.

SAVINGS AND INTEREST

The Demand for Savings. We may repeat that savings are desired by some people for buying consumers' goods, and by others for the purchase of machinery and other equipment that will aid them in making their productive efforts more effective. Whenever consumers' goods are sold on credit, as is nowadays the case with houses, automobiles, pianos, clothing, and a host of other articles, a demand for savings is created for *consumption* purposes. Whenever enterprisers sell bonds and shares of stock, or secure loans from bankers or private individuals, with the thought of enlarging their plants or buying more or better equipment, there is set up a new demand for savings, but in this case for *production* purposes.

Capital Expressed in Monetary Terms. It is often convenient to speak of capital in monetary terms. A business man, for example, may refer to the fact that he has capital to the amount of \$500,000 tied up in his enterprise. The economist also finds it desirable at times to employ a monetary expression when talking about capital. But it should always be remembered that back of the money concept is a goods concept, and that, though capital may properly be expressed in dollars and cents for the sake of convenience, it consists none the less of produced goods that are to be used in further production.

The Productivity of Capital. One of the questions to be answered in connection with the use of capital relates to the ability of the user to pay the owner of savings a premium for their use. Why, we may ask, can

interest be paid? What is there about capital that enables an enterpriser to return to the saver of funds not only the amount originally borrowed—that is, the principal—but an additional amount known as interest? Where does the borrower get the six per cent, or eight per cent, or ten per cent, that he pays to the lender of savings, over and above the amount of the original loan?

The answer lies in the productivity of capital or, more correctly, in the greater productivity of labor when aided by capital, as against its productivity when not so aided. Our study of the roundabout process of production showed that the indirect method of making goods—that is, the method involving the use of capital—is more productive than the direct method. Indeed, labor without any capital whatsoever is scarcely productive at all. We noted in Chapter 5 that of two economic groups, one employing little capital and the other much, the latter would have the greater chance, by far, of enjoying large quantities of consumers' goods. The point we are anxious to make perfectly clear is that interest *can be paid* because the use of capital adds greatly to the effectiveness of labor as it works with land.

The Accumulation of Savings. A stock of capital is built up through abstinence from consumption on the part of those who have incomes that are often more than sufficient to provide them with the necessities of life. In using the word "abstinence" we have no thought of suggesting sacrifice or self-denial, though doubtless much saving takes place at the cost of lowered standards of living. Capital that is accumulated without sacrifice commands just as much interest as that which, in the same market, is got together only through great self-denial. In either case, however, the "capitalist" abstains from current consumption, and as a result of his abstinence an addition is made to the capital stock of the community.

Capital, then, is accumulated through saving. When a man with a \$10,000 income sets aside, in the form of savings, 10 per cent of this amount, he becomes a capitalist. He has, in effect, voted for the manufacture of \$1000 worth of machinery in place of the production of a like amount of consumers' goods. It matters not at all, so far as the accumulation of capital is concerned, whether he lends directly to a business enterpriser or puts his thousand dollars into the keeping of a banker. In either case, it is almost certain to be used in the production of more or less durable capital—"goods-making machines"—which, because of the advantages of the roundabout process, will increase the productivity of the industrial system.

The Conversion of Savings into Capital. Dollars, of course, do not make capital; nor, for that matter, do they make consumers' goods. But dollars represent purchasing power, and the man who controls a quantity of money is able to use it for the purchase of producers' or consumers' goods. Consequently, those who receive incomes are voting, month by

month and year by year, either for or against the accumulation of capital. If they buy consumers' goods up to the full amount of their money incomes, they create an effective demand for this type of commodities; and consumers' goods, and not capital, will be produced. In this way they vote against capital accumulation.

If, on the other hand, they deposit a part of their money incomes in banks, or lend it directly to business enterprisers, they are, in the main, registering effective votes in favor of more capital. (It is possible, of course, that some small part of such savings will be used for the purchase of consumers' goods.) If the result of their action is a decrease in the immediate demand for consumers' goods, funds are thus rendered available so that business men who need more or better machinery are enabled, by borrowing from the savers or from the banks in which the savers have deposited their savings, to add to their equipment and thus to increase their efficiency and productivity. The net result in the long run is the production of more consumers' goods at lower prices.¹

THE RATE OF INTEREST IN THE SHORT RUN

The rate of interest, like that of rent and wages, may be resolved into a problem of value, and the determination of the interest rate dealt with in precisely the same way as the determination of the price of any individual commodity. For capital, as we have seen, is the result of saving, and the price paid for the use of capital depends upon the relationship between the demand for and the supply of savings.

Interest as an Example of Short-Run Price Determination. In applying our methods of price analysis to the determination of interest in the short run, we are dealing with a situation which may be likened to price determination for any commodity under conditions of fixed stock. For we are here considering savings that usually have been invested in a particular kind of capital, of which, by definition of the short run, there is a fixed stock.

Interest on Savings Invested in Capital. Let us suppose, by way of example, that we are considering the determination of interest on a special type of loom used in weaving silk cloth. The owners of these looms, anxious to secure a return on their investment, will ordinarily either use the looms themselves, or place them at the disposal of others who will pay for the privilege of using them. If we think of a loom as constituting the investment of a certain amount of savings, we may think of the return on this investment as an interest rate. If the owner uses

¹ "To save in the ordinary modern sense is virtually to buy producers' goods rather than consumers' goods. One may, it is true, deposit his savings in a savings bank. In that case he entrusts some one else with the work of investing it, so that he invests it, that is, buys producers' goods with it, indirectly instead of directly."—T. N. Carver, *Essays in Social Justice*, p. 223.

the capital himself, the payment is implicit interest; if he lends it to another, it is explicit interest. (These two terms will be discussed later in the present chapter.)

Producers who can employ looms to advantage will pay, under competition, as much as is demanded for their use, up to but not beyond the marginal productivity of this particular kind of capital. Therefore, a demand curve, such as appears in Fig. 36, may be drawn for any given type of capital. In like manner, a supply curve may be drawn. The curve SS shows that we have here almost, but not quite, a condition of fixed supply. In general, the owners of these looms will take whatever return can be had from their investment, rather than get nothing at all. It is true that at a very high rate of interest, such as ten per cent, slightly more of this kind of capital would apparently be offered for use than would be available at one per cent; to be specific, \$26,000,000 worth would be forth-

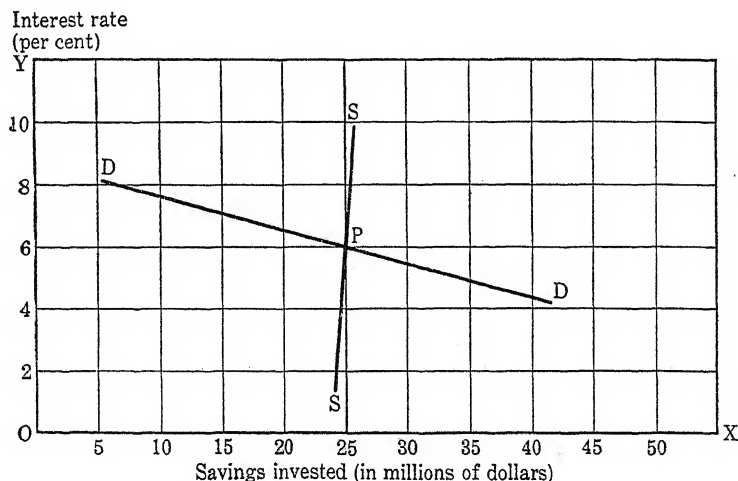


FIG. 36. THE DETERMINATION OF INTEREST ON SAVINGS INVESTED IN A PARTICULAR KIND OF CAPITAL, UNDER SHORT-RUN COMPETITIVE CONDITIONS

coming at the high rate, as against \$24,000,000 worth at the low rate. The return in either case would be over and above whatever depreciation would be avoided if the looms remained idle. According to Fig. 36, therefore, the rate of interest under the conditions pictured would be six per cent.

Interest on Savings Invested in Consumers' Goods. We suggested above that, in the short run, savings have usually been invested in a particular kind of producers' good, and illustrated the point by reference to a special type of capital. However, savings are often invested in consumers' goods—such, for example, as houses—and the income from these goods may be regarded as interest on the investment. In this case, the rates

that consumers would pay would depend upon the marginal utility of the good in question. Supply and demand curves may be drawn to describe the determination of the interest rate on savings invested in a particular kind of consumers' good, quite as readily as to cover the case of those invested in capital.

Interest on Fluid Savings. Moreover, it is probable that, even in the short run, there will usually be a small amount of *fluid* savings—that is, savings which have not yet found investment in either capital or consumers' goods. In such event, the demand curve would combine the bids of both would-be producers and would-be consumers. Those who wish to buy consumers' goods with these savings would be willing to pay much or little, depending upon circumstances. If it were necessary to borrow for the purpose of an essential and urgent surgical operation, probably the borrower would pay an exceedingly high rate rather than run the risk of delay. If, however, it were a question of buying or doing without an automobile or radio set, it is conceivable that the potential borrower would decline to bid more than a very moderate rate. He would doubtless base his bid upon the utility of the desired economic good, in relation to the estimated disutility of paying interest on and eventually returning the savings that must be borrowed if the good is to be secured at once.

Producers who desire to borrow savings go through a similar process of reasoning, but in their case the chief consideration is the productivity of the savings when expended for productive equipment. Most savings, as we have said, are employed in productive undertakings, and not loaned out for consumption purposes. A new machine is needed; it will cost so much; this means that a loan must be secured, and a loan is a demand for savings. What rate of interest will the enterpriser pay for the use of these savings? The answer is that under competition he will pay any amount that is not greater than the marginal productivity of the piece of machinery that the savings will put into his possession.

The Marginal Productivity of Capital. For the principle of marginal productivity applies to the demand for capital, as well as the demand for land and labor. No one will pay more for the use of a unit of capital (that is, for the use of the savings necessary to buy this unit of capital) than the unit may be expected to contribute to his total receipts by reason of its marginal productivity. On the other hand, the competitive enterpriser will be inclined to use more and more units of capital in his business just so long as a unit can be had for a price that is no more than the amount obtainable for the additional product attributable to the unit. The marginal productivity of capital may be ascertained by the now familiar method of removing a unit temporarily and noting the loss in total product that results.

THE RATE OF INTEREST IN THE LONG RUN

Savings in the long run, like the fluid savings referred to in the preceding section, constitute a homogeneous commodity, since they have not as yet been invested and hence may be used for securing whatever kind of economic goods the borrower may desire. The demand for savings in the long run must therefore include both the demand of those who wish to secure capital and the demand of borrowers who aim to spend for consumers' goods whatever savings they get hold of. In Fig. 37, the distance from the base line, OX, to the demand curve, dd, indicates the rates of interest at which producers would borrow various quantities of savings for the purchase of capital. The curve DD, which is the total demand curve for savings, includes the quantities which would be taken, at each of the several rates, by persons who wish to buy capital, *plus* the quantities which would be taken by those who wish to buy consumers' goods. For example, the dd curve shows that

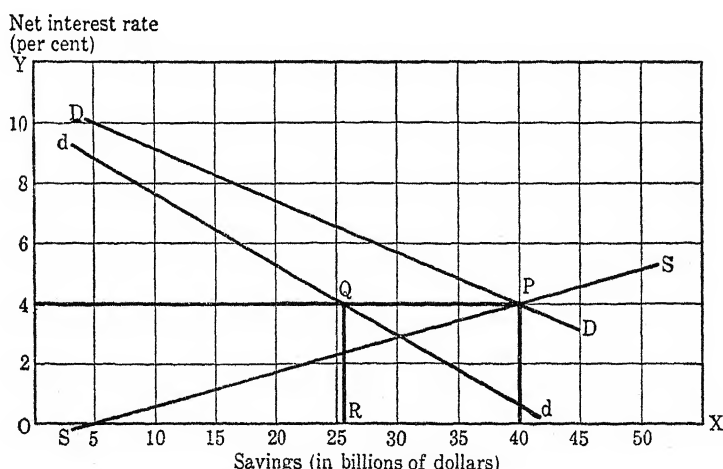


FIG. 37. THE DETERMINATION OF NET INTEREST UNDER LONG-RUN COMPETITIVE CONDITIONS

The rate of net interest, or pure interest (sometimes called the time-preference rate), is that rate which must be paid in order to overcome the marginal saver's preference for present goods as compared with future goods. The diagram shows clearly that the rate of net interest is a matter of price determination.

would-be producers would borrow $17\frac{1}{2}$ billions of savings at six per cent, and the DD curve shows that 28 billions in all would be taken at that rate. Therefore, the quantity that would-be consumers would borrow at six per cent must be the difference between these two amounts, or $10\frac{1}{2}$ billions. At four per cent, the quantities would be 26 billions for producers and 14 billions for consumers, or a total of 40 billions of savings.

It should be clear, then, that the total demand curve, DD, shows the prices (or interest rates) at which various quantities of savings would be borrowed by those who wish to gain possession of either capital or consumers' goods. The slope of the curve (downward and to the right) shows that small quantities of savings would be taken if high rates had to be paid, while appreciably larger quantities would be borrowed if they were available at much lower rates of interest. Whether borrowers are producers or consumers, and whether their needs are great or small, all would be required, on the basis of opportunity costs, to pay the same rate of interest, under conditions of competition. (As will be shown later, though there are differences in gross interest rates, there is a strong tendency toward uniformity in the rate of net interest in the long run.)

The Supply of Savings. The demand curve for savings shows that the lower the interest rate the greater will be the volume of savings that people are willing to borrow. But the supply curve, SS, is similar to the cost curve in price determination under conditions of increasing costs, for it shows that the quantity of savings that will be available for borrowers depends upon the rates of interest that are offered by the borrowers. If a very low rate were offered, the quantity of savings accumulated and lent out would be small, but the quantity would increase as borrowers bid higher and higher prices for savings. The figure indicates that savers can be induced to part temporarily with 15 billion dollars of savings at a net interest rate of one per cent; with 22 billion dollars at a rate of two per cent; with 40 billion dollars at a rate of four per cent; and so on.

Savings of the Wealthy. The quantity of savings that will be available for borrowers is closely related to the practice of abstinence from consumption on the part of those who receive and control incomes. The extent to which abstinence from consumption is practiced depends, in large part, upon whether saving involves sacrifice; and if so, upon the degree of genuine self-denial that is entailed in the postponement of consumption. There are in the United States several hundred persons whose individual annual incomes amount to \$1,000,000 or more. It would seem clear that these persons could save some part of their incomes without depriving themselves of any of the necessities of life, and probably without denying themselves any consumers' goods they desire.

The Possibility of Negative Interest. To those whose incomes run into the millions, or even hundreds of thousands, there is little need to offer the inducement of interest. It is probable that these persons save almost automatically, failing to spend the whole of their incomes simply because all their economic wants are satisfied long before their total incomes have been exhausted. Indeed, there are some few very wealthy persons whose annual receipts are so great and whose savings are therefore so large, that, if they were unable to lend out their savings at in-

terest, they would allow others to use them without charge, if only a safe return of the principal were guaranteed. Or they might even be induced to pay business men a small amount to take and use their savings, so that they (the owners) could be relieved of the worry and expense of storing and protecting the unspent portion of their income. The supply curve in Fig. 37 suggests that, in the hypothetical situation there pictured, some five billion dollars of savings belong to persons with enormous incomes, and would be available to borrowers even though no interest were paid.

Middle-Class Savings. There are others who, though their incomes are not so huge, are yet so fortunate as to enjoy annual receipts from which savings can be made without affecting seriously their standards of living. A business or professional man with a salary of \$15,000, \$10,000, or even \$5000 a year, usually finds it possible to lay aside a part of his income year by year, postponing consumption until some future time when his earning power may have declined or stopped entirely. Some of this saving may be motivated by foresight, pure and simple, and might take place without the offer of interest for the use of the savings. But it is quite possible that, in such cases, the payment of interest acts as an incentive, causing the saver to set aside a larger part of his income than would be saved in the absence of the inducement offered by interest.

On this point, however, we cannot be certain; for it is held by some that there are savers who have in mind the accumulation of a definite sum, say, \$100,000, by a given time; and that savers of this kind would be compelled, in order to reach their goal, to save a larger amount each year if there were no interest than is necessary when interest is paid. Five thousand dollars a year for twenty years would provide the saver with \$100,000 if interest were not paid, but a much smaller sum saved annually would total \$100,000 in twenty years if the savings were loaned out at interest compounded annually. There is a possibility, then, that the payment of interest may sometimes decrease, rather than increase, the savings of those who receive annually more than they need spend for purposes of consumption.

Savings of the Poor. When we consider those groups of wage earners whose earnings are scarcely sufficient to buy a comfortable standard of living, we find that the urge to spend for immediate consumption is very strong and is unlikely to be resisted unless great inducements are offered in the form of high interest rates. It is reasonable to suppose that persons with small incomes are the least willing of all to save, and will refuse to save unless the premium offered for the use of their savings is large. Fig. 37 shows that as large an amount as 50 billion dollars of savings can be had only if those who are reluctant to save are offered five per cent in order to overcome their reluctance. Of course, if any savers are paid five per cent, all savers will demand this high rate of return from those to whom they lend.

The Time-Preference Theory of the Supply of Savings. Our discussion thus far has shown that some persons, because of their very large incomes, can save without difficulty, while others whose incomes are quite small are able to save only at the cost of inconvenience, or even deprivation. We have no thoroughly reliable data relating to the income groups from which the huge annual volume of savings in this country is recruited, but we may hazard a guess that the capital accumulation from year to year is largely the result of saving on the part of those who could spend their entire incomes without great difficulty, and who would enjoy thoroughly the consumers' goods that their savings would buy, but who are impelled for various reasons to refrain from spending up to the full limit of their incomes. One of these reasons is the desire to provide now for future needs. But there are good grounds for believing that, for most persons, the future weighs less heavily than the present. The admonition, "Take no thought for the morrow," may not be observed to the letter, but there are certainly many individuals to whom the present appears to be much more important than the future.

The Reluctance to Postpone Consumption. When, therefore, a person is asked to postpone consumption until some future time, as he must do if he lends his savings to another, he is likely to question the desirability of the postponement. He will want to know why he should surrender (say) \$100 in purchasing power today for the promise of \$100 in purchasing power a year from now. There is a chance, first of all, that the Grim Reaper will come along and cut him down before the loan is repaid. Or his income may be increasing year by year, so that \$100 will seem less important a year hence than at present. Or, again, he may wish to attend a presidential inauguration or a World's Fair which, once past, cannot be witnessed again for some years.

Hence, though there may be reasons at times why future goods appear to be more desirable than present goods, it seems that most persons would rather have the use of a dollar today than in the future. The desire for things present rather than things to come is the basis of the theory of "time-preference," which is frequently advanced as an explanation of the supply of savings in the long run. Referring again to Fig. 37, we see that 5 billion dollars are saved by some persons who have exceedingly large incomes or by others who are unusually provident. The supply curve shows that this amount could be had by borrowers even without the payment of interest. But in order to call forth further savings, a premium must be paid to overcome the prevailing tendency to spend rather than save.

The Rate of "Time-Preference." This premium is called the "time-preference rate," and its size is believed to measure the saver's preference for present as compared with future goods. For some persons the preference is slight and may be overcome by the payment of a very low rate of interest, say, one per cent. But if large quantities of capital are needed,

requiring considerable saving on the part of those who *could* readily spend but need not spend their entire incomes, it would be necessary to increase the incentive. Some persons will save at two, but not at one per cent; others at three per cent, but not at two; and so on. The supply curve in Fig. 37, showing the prices (in the form of interest rates) at which various amounts would be saved and loaned, illustrates graphically the time-preference theory.

We have emphasized more than once the importance of the marginal unit in connection with price determination. We have seen that the price paid for each and every unit of a good is the same as that paid for the marginal unit—which is the unit the marginal buyer is just induced to purchase at the price asked. This is the case, even though some buyers would pay more rather than go without the good, as is shown in every demand curve. Necessarily, then, the price *received* for every unit of a good is the same as that received for the marginal unit—which is the unit the marginal seller is just induced to sell at the price offered. Again this is the case, despite the fact that some sellers would take less rather than miss a sale. The supply curve indicates the truth of this statement.

The demand for and supply of savings bring about a similar situation. At some point or other there will be an equilibrium of supply and demand. The interest rate at this point will be such that the volume of savings that borrowers are willing to take will equal exactly the volume that lenders are willing to offer. In Fig. 37 the equilibrium of supply and demand takes place at the point P, the amount of savings borrowed is 40 billion dollars, and the interest rate is four per cent. Four per cent is the time-preference rate of the marginal saver. It is the premium that must be paid to overcome his reluctance to save, and presumably it measures his greater desire for present as compared with future goods. According to the time-preference theory, this marginal saver would spend instead of saving, if offered a smaller inducement than four per cent interest. So much for the supply side of the problem.

Gross Interest and Net Interest. The rate of net interest, which is the interest rate that we have been discussing thus far, is the price that would be paid for the use of savings if there were no costs involved in collecting and lending out these savings to others, and if, further, there were absolute certainty of the safe return of all loans. It is, in a word, a payment made to induce people to postpone consumption. Net interest, as we have seen, tends to be uniform throughout a given market, since the rate paid for every unit of savings must equal, under perfect competition, the rate paid for the marginal unit. However, it is a matter of common knowledge that some business men pay higher rates of interest than others for borrowed savings. But we are speaking now of *gross* and not *net* interest.

Charges for Administering Loans. Gross interest consists of net in-

terest, plus a charge for handling the loan in question and a further charge for taking care of whatever risk may be involved. Bankers, who spend their time and effort in collecting surpluses from savers and lending them out to others, cannot be expected to render this service for nothing. Consequently, even though there were not the slightest danger of the borrower failing to return his loan when due, the rate of interest demanded of him would necessarily exceed the net interest rate by the amount charged by the banker for his services.

The Element of Risk in Interest. But unfortunately the element of risk is seldom wholly absent from business undertakings. The banker (or other loan agent) who is responsible to the original saver, will therefore add a further item to the interest charge in order to cover risk, on the theory that in the case of every loan that he makes there is a possibility of non-payment. Some businesses are more hazardous than others and much more liable to failure, and on this account the charge made to cover risk is sometimes small and, again, large. Owing to this fact, the gross interest rate is sometimes low and sometimes high.

When credit is extended to well-established, conservative business houses operating in routine fields of industry, the risk of loss is slight and gross interest is low; but when loans are made to enterprisers in new, untried lines of business, such as automobile manufacture at the beginning of the century, the hazards are great, and the lender demands a high rate of gross interest. Gross interest therefore, unlike net interest, does not show a tendency toward uniformity of rate, but varies with the degree of risk that is represented in the loan.

Gross Interest, Marginal Utility, and Marginal Productivity. It is, of course, the *gross* and not merely the *net* interest rate that must be paid by the borrower of funds, whether he wants them for the purchase of consumers' or producers' goods. If this gross interest rate, in a given case, happens to be six per cent (made up, let us suppose, of four per cent to cover time-preference, one per cent for administrative costs, and one per cent as a payment for risk), then six per cent is the measure, on the demand side of the problem, of the greater utility, or desiredness, of present as compared with future goods, on the part of the marginal borrower who uses the loan for purposes of consumption.

Six per cent represents, also, on the side of demand, the anticipated marginal productivity of the capital that can be bought with these funds, as estimated by the borrowers who are prepared to pay this rate on loans for productive purposes. Certainly, the borrowers who are producers will not pay six per cent interest unless they expect, through the use of the additional capital purchased with the funds, to secure an extra product that will at least pay the interest charge. Nor will they cease to add units of capital to their equipment so long as the gross interest charge is smaller than the value of the additional product realized through the use of the

capital on which the interest is paid. This means that producers will continue to borrow savings up to the point at which the value of the marginal product of the capital that is purchased is equal to the gross interest paid for the use of the savings.

The *net* interest rate, therefore, is determined by an equilibrium of the demand for and supply of savings. The *gross* interest rate (the rate which is actually paid by the borrower) is determined by the demand for and supply of savings *for a particular purpose*, and consequently varies with differences in the administrative costs and risks involved.

Savings Unrelated to Time-Preference. The time-preference theory of net interest is sometimes attacked on the ground that much saving would take place in present-day society without the payment of a premium to induce the savers to refrain from present consumption. We have already referred to saving by the rich and by those intent upon safeguarding old age. To savings of these kinds, which are not dependent upon overcoming time-preference, may be added those which are accumulated through public taxation and the reinvestment of corporate earnings. When a government taxes its people for the construction of public works, saving takes place without the payment of interest. Similarly, when the directors of a business corporation decide to use past earnings for an enlargement of plant, there is again enforced saving which does not require that the time preferences of *individuals* be overcome. However, it is safe to say that corporate savings would not usually be made unless the directors of the corporations expected these savings to pay a return, and this return may properly be regarded as interest.

Importance of the Marginal Saver. But unless sufficient savings are accumulated by such methods, it will be necessary to call upon voluntary savers to provide a part (and probably a large part) of the total quantity. These savers will demand and receive interest, and the rate of net interest will be measured by the premium that is necessary to call forth a given quantity of savings. If but little capital is to be accumulated, it will be very largely the result of saving on the part of the well-to-do, the marginal saver will experience but slight inconvenience, and the rate of time-preference will be low. But if huge quantities of savings are to be amassed, it is likely that the marginal saver will be a person of very modest means, that the sacrifice involved in the limitation of consumption will be great, and that he will save only if the net interest rate is high. In general, then, a small total quantity of savings can be had at a low interest charge, and a larger total volume will be forthcoming only if the interest rate is raised.

Explicit and Implicit Interest. Interest is *explicit* or *implicit*, depending upon whether the owner lends his savings out or uses them himself. If he lends them to another, the income that he receives is explicit interest. If he uses them in his own business, they still return income—this time implicit interest. The distinction is precisely the same as that which we

have already drawn between explicit and implicit rent. The enterpriser, if he is to have a sound knowledge of his costs of production, must, of course, charge against his business not only rent for land personally owned and used in his enterprise, and wages for his own services, but also interest on savings of his own that are employed in the undertaking.

Interest, Rent, and Economic Inequality. There are two differences between interest and rent that are regarded as important by those who are particularly interested in looking at the distribution of income from the social point of view. The first is that, owing to ineradicable differences in the productivity of various pieces of land, there are great and permanent differences in the amounts received as rent by the owners of different plots of land, depending upon whether they or their forebears have been lucky or unlucky in the selection of sites.

Many people have been made rich because, by the merest chance, they have happened to hold title to some acres on which oil or coal has been discovered, or to a city block which fortune has decreed should be on a main artery of traffic. Thus, pure luck often plays a leading rôle in the distribution of income from land. Savings, on the other hand, command a *uniform rate* of net interest in a given market at a given time; that is to say, all units of savings are paid for at the same rate, except for differences in administrative costs and risks, and with the further exception of differences that may exist for short periods of time though they are wiped out in the long run.

The second distinction between rent and interest relates to the fact, which we have already noted, that land is virtually fixed in quantity, whereas savings are increasing rapidly in volume year by year. The student who has mastered the theory of value will see at a glance that, as the demand for land increases as a consequence of growth in population, the income from land must increase also, owing to the existence of a fixed quantity. But the amount of savings available (through an increase in saving) may steadily keep pace with the increase in the demand for savings, with the consequence that the net interest rate remains constant. Indeed, it is conceivable that the accumulation of savings might take place at so rapid a pace as to bring about a decline in the rate of net interest.

Some critics of capitalism, though they regard the payment of interest as necessary if we are to have sufficient capital to operate our industrial machine, hold that rent on land should be appropriated by the government and used for the good of the whole people. The critics point to the distinctions between rent and interest, such as we have outlined briefly; they urge that, since land is a free gift of nature, its benefits should accrue to all the people, and not to a few only; they show that the payment of rent leads to grave inequalities in wealth—inequalities that are becoming greater year by year; and finally, they insist that rent is unearned income—an unnecessary payment—since the appropriation of rent by the state

would not deprive society of the use of land. These are questions of great importance, but questions which we cannot undertake to discuss in the present chapter.

The Social Usefulness of Interest. Before quitting the subject of interest, we must mention two ways in which the payment of interest is said to be of benefit to society. First of all, it provides an incentive for the saving of income, and thus increases the volume of purchasing power available for building transportation lines and factories, equipping mines and farms, and providing the huge quantity of capital goods that is a part of every highly organized industrial order.

We need scarcely enlarge upon the advantages that result from an abundance of mechanical aids. An understanding of the roundabout process is all that is needed to convince one that without a large accumulation of capital we could scarcely hope for high standards of living for the masses. Even those who are most outspoken in their denunciation of the private ownership of the instruments of production seldom deny the usefulness of capital goods. The payment of interest, by encouraging people to save, leads to an increase in the quantity of capital, and thus to the production of more goods and the creation of higher real incomes.

It is also claimed for interest that it directs savings into the most productive economic channels and, as a consequence, confers a great benefit upon society. The argument runs about as follows: Various industries bid against one another for the use of savings. Savings tend to flow into those industries that offer the highest rates of interest (assuming, for the moment, equal risk in all industries). The industry that can pay the highest rate is the one which at present is underequipped, and which therefore turns out so few units of product that, with a large demand for the product, the price received is high and profits are large. Thus an industry which offers a high rate of interest for the use of savings is one which at present is unable to provide society adequately with its product.

The payment of the high interest rate not only calls attention to society's need for more goods of this particular kind, but also attracts savings to this industry and thus tends to fulfill the need. Other enterprisers, seeing the large profits to be obtained in this industry (profits which result, it should be noted, from society's need for the product), bid high prices for savings, so that they may buy capital with which to enter the industry. Competition results, the good is made in large quantities, the price goes down, and the rate of interest in this industry eventually falls. The net result, then, is that society is amply supplied with an economic good that was previously very scarce.

In a society in which incomes were approximately equal, it is probable that the interest rate would aid in bringing about the production of goods most needed before less essential goods were manufactured. But in our present economic order, the interest rate performs this directive function

very imperfectly, if at all. If working-class families need cheap dwellings and rich men want million-dollar yachts, it might appear to be socially desirable to have the houses put up before the yachts are built. But yacht-building is vastly more profitable than house-building, and if savings were very scarce the interest rate offered by yacht builders for the use of savings might easily be twice as high as that offered by housing contractors. The chances are, then, that savings would be turned into the building of yachts and not houses.

It is doubtless true that the interest rate directs savings into the most productive lines of industry, if by "productive" we mean productive of value; but the payment of interest does not insure that necessities will be made before luxuries. Indeed, it comes closer to insuring that luxuries will be made first. For the large gains obtainable in the luxury trades permit a high rate of interest to be paid, and thus savings are attracted from less lucrative businesses which may, nevertheless, be more essential to social welfare. Certainly, the interest rate does not guarantee that cake shall not be baked until all the people have bread. On the contrary, it may induce some bread makers to shift to cake-baking because of the greater ease in securing savings at the high interest rates that can be paid by cake bakers, but not by the bakers of bread.

Presumably, the force of competition would eventually reduce the profits of cake bakers so that they could no longer offer unusually high rates for savings. Cake would continue to be made, however, as long as people with purchasing power offered a price sufficiently high to cover all costs of production. Of course, if incomes were approximately equal, it is probable that necessities would be purchased before luxuries were demanded. In the absence of anything approaching equality, high prices for luxuries will be paid readily by the very wealthy; and, as a consequence, there is the possibility that not only capital, but land and labor as well, will fail to be employed in lines of industry in which, from the point of view of public welfare, they are most needed.

Interest is a payment made for the use of savings.

Net interest is a payment made to induce people to postpone consumption.

Gross interest is net interest plus charges added to cover risk and administrative costs.

1. Define "interest."
2. Does capital consist of money or goods?
3. Why is it possible for business men to pay interest for the use of savings?

4. When we say that a stock of capital is built up through abstinence from consumption, what do we mean by the word "abstinence"?
5. Capital is the result of saving. Does every form of saving bring about an accumulation of capital? Explain.
6. A person may lend his savings directly to a business enterpriser or may deposit them in a bank. Is capital accumulated in both of these cases?
7. "To save in the ordinary modern sense is virtually to buy producers' goods rather than consumers' goods." How may a person of small income, with \$100 of savings annually, buy producers' goods?
8. "The rate of interest may be resolved into a problem of value." What, then, will be the forces determining the rate of interest?
9. When people wish to borrow the savings of others in order to buy consumers' goods, what will determine the maximum they will pay for such savings?
10. When people wish to borrow the savings of others in order to buy producers' goods, what will determine the maximum they will pay for such savings?
11. Will the price paid for the use of capital tend to equal the "marginal productivity" of capital? Explain.
12. Discuss the sacrifice involved in the accumulation of savings by the wealthy, by the middle classes, and by the poor.
13. It is sometimes suggested that, if interest were not available, the very wealthy "might even be induced to pay business men a small amount to take and use their savings." Explain why this might be true.
14. Even though millionaires save with no sacrifice, they receive for the use of their savings a rate of interest as high as that received by the very poor who can save only at great sacrifice. Why is this the case?
15. State the "time-preference theory" of interest.
16. Explain the objections of the average person to the postponement of consumption. What is the relationship between these objections and the interest rate?
17. Some savings are accumulated without reference to the principle of time-preference. Give examples of such savings.
18. Distinguish between *gross* and *net* interest.
19. Give examples of the two items included in gross interest which do not enter into net interest.
20. Distinguish between *explicit* and *implicit* interest.
21. From the point of view of social welfare, there are two important distinctions between interest and rent. Discuss these distinctions.
22. There is a tendency for the net rate of interest to be uniform in a given market, but for there to be differences in the gross interest rates. Explain.
23. Some writers claim that the payment of interest is socially useful. What can be said for and against this idea?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 23.

Profits

PROFITS ARE THE SHARE OF INCOME THAT GOES TO THE BUSINESS ENTERPRISER, *over and above the return he gets for any land, capital, or labor which he personally puts into the business.* We have described the enterpriser as the person, or group of persons, that assumes responsibility for the ownership of a business. The enterpriser, occupying a position of leadership, takes upon himself the responsibility of paying rent, wages, and interest to the owners of the other agents of production, and receives profits by reason of his ownership. Often, as we shall see, he invests his own land, labor, and capital in his business, and receives a return also for the use of these productive agents.

GROSS PROFITS AND NET PROFITS

It is a rather common practice among business men to deduct total expenditures of all kinds from total receipts, and to call the balance "profits." Profits of this kind are called *gross profits* by the economist. *Net profits* are arrived at by making the further deductions of implicit rent, implicit interest, and implicit wages. Only by charging all these items against costs of production can the enterpriser get an accurate notion of the expenses incurred in transacting his business. And not until he has made these deductions does he enjoy profits, in the sense in which the economist ordinarily uses the term; for it is upon net profits, or "pure profits," that the economist lays particular stress.

Wages in Gross Profits. In an earlier chapter we noted the fact that the income paid to *active* business enterprisers for their labor is called wages of management. It is entirely proper, then, to classify as wages (*implicit* wages, of course) that part of the enterpriser's gross profits which results from employing his own time and energy in his business. This is, indeed, a necessary expense which must be met if the enterpriser is to continue to operate. A reasonable test of productivity is the ability of the enterpriser to secure employment with another business concern. Whatever he can obtain for his services elsewhere is surely not too much to charge against his own business as wages of management.

Wages of Management and Marginal Productivity. Since managerial ability, as expended in production, is simply a form of labor, the wages

of management, like other wages, are determined by the conditions of supply and demand, and tend to equal the marginal productivity of the particular type of human effort that happens to be under consideration. Without again rehearsing the principle of marginal productivity as it applies to wage determination, we may say that the marginal productivity of business ability of a given kind can be measured by ascertaining the difference between the total product of economic society when a single unit of a given type of business ability has been withdrawn from the productive process, and the total product when this unit is employed. The value of this marginal product measures the maximum wage that will be paid for the unit, and competition for managerial labor of this kind will tend to keep the wage up to this amount.

Equalization of Managerial Wages. Marginal productivity measures, moreover, the wages of management received by those who are in business for themselves; for there will be little temptation for a man to operate his own enterprise if it pays him a smaller wage than his services would command in the open market. Moreover, if wages of management paid by an enterpriser to himself should be much higher than the current wage paid to managers of the same grade who are employed by others, the costs of production of the former would be so high as to make it difficult to compete with others in the sale of their product. Hence, we may assume an equalization of the wages of equally competent managers, as of other types of workers, throughout industry in a given market. And, as we have said, the wages of management, like ordinary wages, though equal to the marginal productivity of the particular type of ability that may be under consideration, are actually determined by the general conditions of supply and demand.

Rent and Interest in Gross Profits. We have already argued that the enterpriser, if he would keep the records clear, must include in his costs of production the items of rent for land personally owned and used in his business, and interest on savings of his own invested in his enterprise. In each case the amount to be charged can be determined on the basis of competitive prices for land of this particular quality, and for savings employed in businesses of the type that he is conducting. It will be apparent, then, that the payments due the enterpriser for his personal investment of land, labor, and capital, may easily be included in costs of production under the heading of rent, wages, and interest. Indeed, it seems much more logical to classify these payments in this way than to include them with profits.

The Residual Character of Net Profits. Having disposed of implicit wages, implicit rent, and implicit interest in the manner just outlined, we have also disposed of the greater part of gross profits. Indeed, it may appear that there will be nothing left; for we have stated repeatedly, in the past five chapters, that each factor of production tends to get as its

share in distribution the full value of its marginal contribution to production; and we have said, further, that the price of a commodity is the sum of the prices that must be paid for the use of the several productive agents employed in its making.

Nevertheless, there is often something left over after payments have been made for the use of land, labor, and capital; and since there is no one else in a position to claim this residual or surplus product, it is taken by the enterpriser, who, as custodian of the treasury, is in a peculiarly favorable position to hold fast to whatever may remain after the owners of the productive agents have been paid off. It is this residual product that the economist has in mind when he speaks of net profits, or pure profits. We shall now examine briefly the circumstances in economic life that give rise to net profits.

CAUSES OF NET PROFITS

Our analysis excludes from net profits all payments to which the enterpriser is entitled by reason of the investment of land and capital, and for personal services rendered in the operation of his business. There remain, therefore, only the rewards that may chance to come to him through the *ownership of the business*, which is not the same thing as the ownership of all, or part, of the land or capital used in the enterprise.

Profits as a Consequence of Risk-Bearing

The enterpriser, as owner of the business, secures land, labor, and capital at stipulated rates. He believes that he can employ these agents of production in such fashion as to produce goods which will sell for a larger amount than his total costs for rent, wages of all kinds, and interest. But whether he succeeds or not, he is not relieved of his responsibility to meet these definite obligations. If he is fortunate, and succeeds in getting more for his product than it has cost him to produce, he reaps a profit. But if he is unlucky, and his expenditures are greater than his receipts, he is still under the necessity of making the promised payments, and thus suffers losses or, as they are sometimes called, "negative profits."

If, then, as we have already suggested, the enterpriser is in a strategic position to claim for himself the residual product of his business, he is also so situated that he cannot avoid shouldering the losses, if losses there be. On this account, the enterpriser is often described as the risk-bearer of economic life; and the income that is his in the form of net profits, when the business turns out well, is said to be the reward for the bearing of risk. Unpredictable occurrences, which mean risk for enterprisers, are unquestionably one of the causes of net profits.

To this cause should be added the absence of perfect competition, which may give rise to profits, positive or negative; and also predatory activities

in which enterprisers have been known to engage, and through which they have made gains at the expense of others. We shall now look a little further into these sources of profits.

Insurable and Non-Insurable Risks. In our chapter on business risks, we noted that while it is possible to insure against many of the hazards of business life, yet there are numerous uncertainties which cannot be eliminated or shifted through the medium of insurance. When business risks can be and are insured against, the insurance premiums become definite costs of production, and thus enter into price. The many uncertainties connected with the operation of modern business, which are not capable of being reduced to statistics and treated on an actuarial basis, must, nevertheless, be taken care of by someone. Risk-bearing of this kind is the special function of the business enterpriser.

General Prices and Profits. Because goods are produced in advance of demand, the enterpriser runs the risk of getting less for his product than it has cost him to produce, owing to a decline in the price level. On the other hand, if luck is with him and the price level rises steadily, the enterpriser may reap a substantial profit.

Let us suppose that a business man begins today to produce goods for sale six months hence. If the general price level is low, he buys raw materials at moderate prices, and contracts with labor to work at wages which are low because general prices are low. But if, by the time the goods are ready for delivery, the price level has risen appreciably—say, 10 per cent—the goods, though manufactured at low cost on the basis of the old price level, will be sold at high prices on the basis of the new price level. He may gain, further, by borrowing funds when prices are low, and repaying when they are high.

It is clear, then, that, because commodities are produced in anticipation of demand, business men reap profits in times of rising prices; and on this account, enterprisers are always optimistic when prices are on the upward grade. The reverse is true, of course, when prices are declining, since goods made of materials and labor bought at high prices must later be sold on the basis of the new price level, which may mean selling at less than costs of production. Business men lose, moreover, if they are compelled to repay, when prices are low, loans which were made when prices were high. Fluctuating price levels, therefore, give rise to net profits, positive or negative.

Individual Prices and Profits. Even if there were no change in the price level, there would still be risk involved in providing goods for sale at a future time. For, as we emphasized in our study of price determination, it is impossible to know in advance exactly how great the demand for a given product will be; furthermore, even though conditions of demand were fully known, there is usually little or no coordination between producers, and as a consequence the market may be flooded with a given commodity, or the good may be available in only very limited quantities.

If, because of a larger demand or a smaller stock of goods than was anticipated, enterprisers are able to sell at a price well above costs of production, they take their reward in the form of a substantial profit. But if, as is not infrequently the case, the demand is so small that it will not absorb the total quantity of the good available at a price covering costs of production, the price will of necessity be reduced and producers will have to take a loss. In the absence of any centralized control over production, and with very inadequate knowledge of probable demand, production in advance of demand is a venturesome undertaking.

Profits and Losses in Agriculture. It is particularly so in agricultural pursuits in which an enterpriser's crop may be destroyed by drought, flood, hail, or frost; or, equally bad from his point of view, may be rendered virtually valueless because of a "bumper crop" throughout the country. An individual producer's peach crop may be ruined by frost, or his tobacco crop destroyed by hail. A huge yield of cotton may drive the price down until it is well below costs of production; or, again, as has happened more than once, an oversupply of apples may result in the fruit being left on the trees to rot, because the costs of picking, packing, and transporting are greater than the price obtainable. Sometimes, of course, the shoe is on the other foot. For example, a crop failure in several great wheat-growing areas may so limit world production as to bring a large profit to the fortunate persons whose crops are not affected.

Thus is the enterpriser in the field of agriculture called upon to bear risks. He begins his operations far in advance of the time when the product will be sold, and, as a consequence, his economic fate, until the crops are harvested and sold, lies in the lap of the gods. For, unlike the manufacturer and merchant, he is at the mercy not only of economic forces, but of natural forces as well.

Profits Due to War Conditions. The possession of a large quantity of a given good, or of the equipment needed for its fabrication, may easily give rise to enormous profits if there happens to be an unexpected demand for the good or a limitation of output on the part of some producers. World War I brought an unprecedented demand for essential goods such as steel. As a consequence of this increased demand, stockholders in steel companies throughout the United States drew large dividends, which represented the profits to which they were entitled as owners of these companies, and therefore risk-bearers.

That war also brought fortunes to a number of American dealers in German dyes, who, because imports from Germany were suddenly cut off, were able to sell the stock on hand at fabulous prices. This, of course, occurred before the United States had developed a dye industry of its own.

Degrees of Hazard in Business. Some lines of business are much more risky than others. Whenever the operation of a business involves the expenditure of large amounts before it can be known whether the com-

modity or service will be favorably received, there are chances of large profits and also of large losses.

An outstanding example of such profits and losses is to be found in theatrical production. The late Daniel Frohman, who was long a leading producer in the American theater, once said that the hazards involved in this field of enterprise are so great that theatrical production may well be called a gamble. It is almost impossible to predict in advance whether or not a play will achieve popularity. If it does, it may make millions for its sponsor; if it does not, it leaves him out of pocket perhaps some twenty of thirty thousands in the case of a small dramatic production, or several hundreds of thousands if he has gone in for musical comedy or revue.

A somewhat similar situation exists in the clothing industry and other businesses in which fashion plays a prominent part, with manufacturers trying to induce the public to adopt novelties, and the public now accepting and again rejecting the proposed innovations. A happy guess as to what people will buy may lead to large profits, but there is always the possibility of guessing wrong and having to take losses instead. However, it is the particular function of enterprisers to assume risks; and though the business hazards just cited are rather unusual, they differ from the risks of the average business man in degree rather than in kind. Some enterprisers are willing to stick to well-established industries in which there is small likelihood of loss, but also small chance for large profits. Others of more venturesome nature sally forth into unexplored fields of industry, lured on by the possibility of unusual profits, and willing to take the chance of losing very considerable sums.

Stockholders as Enterprisers. Since we have narrowed our concept of profits so as to include only the return that results from ownership of business, we must place in the class of enterprisers (as entitled to profits, and to losses as well) all persons who have their funds so invested that they, being owners or part-owners of a business, are risk-bearers. Stockholders, of course, meet these requirements; and stockholders must therefore be regarded as enterprisers, in the sense that they are entitled to a return for risk-bearing.

The buyer of shares of common stock casts his lot with that of other stockholders, and agrees to accept as a reward a share in the profits of the business. If the business prospers greatly, his dividends are large, and he receives a return higher than would be paid him if he lent his money outright to the concern, taking a promissory note in place of ownership. If the business is unsuccessful, the stockholder gets small dividends or none at all. He is, then, sharing in the risk of ownership of the business; and by virtue of his ownership, he receives positive profits when the business does well and negative profits (or losses) when it is conducted at a loss.

Profits Due to the Absence of Perfect Competition

We have discussed the possibility of profits arising from the uncertainties that appear to be inherent in business undertakings. We have dealt particularly with profits that are closely related to the production of goods in anticipation of demand. Changes in general prices, unforeseen conditions of supply and demand, and forces beyond the control of the enterpriser, such as freakish weather or an important war, have been mentioned as causes contributing to positive or negative profits. We shall note now some gains which are independent of such causes, being the result of interference, intentional or unintentional, with competition.

Discrepancies Between Costs and Selling Price. Let us return to our contention that, under perfect competition, there is a tendency for the prices paid for the productive agents (that is, the total costs of production) to equal the selling price of the commodity in the making of which they have been used. This contention is sound enough, granted the condition that has been assumed, namely, that of perfect competition. But, as we have so often admitted, absolutely perfect competition is a state that is yet to be attained. This fact does not detract greatly from the significance of our generalizations, but it does prevent our claiming exactness of results in the actual working out of economic theories.

When, therefore, we say that the enterpriser pays the owner of a productive agent the full value of its marginal product, we refer to what would happen under ideal conditions. Since competition is not perfect, the amount paid for the use of a factor of production is only approximately the value of its marginal product. Herein lies an opportunity for a profit for the business man; for, although the landowners, wage earners, and capitalists may be trusted to seek their own self-interest, it is probable that the enterpriser is ordinarily more favorably situated than they for effective bargaining. Indeed, his very existence as a business man is dependent upon his knowing the game and playing it to his own advantage.

The Enterpriser's Bargaining Position. The instability of conditions in the business world makes it virtually impossible for the owners of productive agents to know the exact value of the marginal product of these agents. Ordinarily, they know simply that enterprisers are paying this price or that for a factor of production. They may assume, and fervently hope, that competition will force enterprisers to offer the full value of the marginal product for the use of productive agents. But the enterprisers themselves may not know precisely the amount that is added to total product by use of the marginal unit of land, labor, or capital; and consequently the rate offered for an agent throughout a given industrial market may be slightly less, or even slightly more, than the exact value of the marginal product.

Naturally, enterprisers will try to see to it that any error that may be

made is on the side of underpayment rather than overpayment; the point is that they feel the necessity of being on the safe side of the proposition in bidding for the use of land, labor, and capital. Finally, even though the enterpriser *should* know the exact value of a marginal product, the customary absence of perfect competition would probably prevent the price paid for an agent from being bid up to an amount exactly equal to this value. All in all, then, in the field of actual business practice, there is room for a margin of profit; there is also the chance of loss, but loss is less likely than profit because of the strategic bargaining position of the enterpriser.

The Time Element in the Limitation of Competition. Imperfect competition in the purchase and sale of productive agents is attributable in part to the fact that enterprisers often make relatively long-term contracts for land, labor, and capital. Once the contracts are made, they must be lived up to, despite the fact that other enterprisers, a few days or weeks later, may, in a changed market, make other contracts which are either more or less favorable than the first. Consequently, competing concerns will be operating at the same time with productive agents of equal grades, but agents for which different amounts are being paid in rent, wages, and interest.

Land that was leased many years ago for a long period may cost the enterpriser substantially less, or more, than similar land leased this year by another business man. Wage contracts entered into today covering (say) a two-year period may be more advantageous or less advantageous than a contract signed six months or a year ago. Interest rates change from time to time, and yet, once agreed upon, they run over a period of months or years; thus competing enterprisers have different costs for this productive agent. If the price obtained for the finished good covers all costs of those enterprisers who have high rent, wages, and interest to pay, the more fortunate enterprisers with their lower costs will enjoy temporarily a margin of profit. If, on the other hand, the selling price of the good is low, the firms that have contracted for productive agents at an unfavorable time will be compelled for the present to take losses.

The point here made is somewhat different from that which was emphasized in connection with changing price levels. Business men *as a class* make profits in periods of rising prices and take losses when general prices decline. But owing to the time element involved in contracts relating to productive factors, one enterpriser in a given line of industry may be reaping profits, while another, who has contracted for productive agents at a different time or for a shorter or longer period, is taking losses.

The time element, therefore, results in imperfect competition among enterprisers in their bidding for agents of production. For we cannot claim free mobility for land, labor, or capital which is withheld from the market by reason of contracts extending into the future; and without free

mobility there cannot be free competition. Moreover, even if there were no contractual obstructions to mobility of the agents, the absence of full knowledge of market conditions on the part of all concerned would prevent perfect competition from being realized, and would thus lead to profits for some enterprisers.

Monopoly Profits. In our study of price determination, we noted the fact that monopoly price has no necessary relationship to costs of production. Though the monopolist may decide that he will obtain the greatest possible total net return by selling large quantities of his product at little more than cost of production per unit, it is equally possible that he may restrict his product, selling only to those high up on the demand schedule, and thus taking a large monopoly profit per unit of product. In either case, monopoly power, complete or partial, is one of the causes of profits, and one of great importance in these days of widespread combination. And, of course, imperfect competition gives rise to profits, as we saw in Chapter 16.

Tariffs and Profits. The erection of protective tariff barriers brings another interference with competition, and is therefore an aid to the realization of profits. The purpose of a protective tariff is to shut out foreign competition, and thus leave the production of a given commodity in the hands of domestic enterprisers. These domestic enterprisers, of course, may carry on active competition among themselves; but it is possible that they will instead come to an agreement, divide up the field, and depend upon a friendly tariff to insure profits.

If, for example, it costs the least efficient American producers three-quarters of a cent a pound more than Cuban enterprisers to produce sugar, it might be good business for American sugar growers to unite in demanding a one-cent protective tariff. Such a tariff, once attained, would insure at least a temporary profit to all American sugar growers, inefficient as well as efficient. The profit might be wiped out finally by an increase in production in this country, if the increase were of sufficient size to make it unnecessary to rely upon imports of sugar. But in any event, this profit would probably be enjoyed for a very long time, because so large a part of our sugar supply is provided by Cuban producers. Under the tariff conditions suggested above, the major portion of this commodity would continue for a time at least to come from Cuba, and necessarily (because of the tariff) would sell at a high price. The situation would be comparable to that of partial monopoly treated in an earlier chapter. And the net result would be a profit for American producers of sugar.

Profits from Predatory Activities

Though honesty is doubtless the best policy in business if one wishes to carry on operations indefinitely, it can scarcely be denied that some

business men have made, and others are now making, large profits by engaging in predatory activities.

It is sometimes held that an enterpriser can win success only through fair dealing with his customers, and this is doubtless true "in the long run." The swindler in business life usually comes to grief in the end; but in the meantime he may reap a handsome profit and, by professing conversion and reformation, he may even retain his place in the good graces of the public. Toward the end of the nineteenth century, the evil practices of those in control of some of our great industrial trusts attracted wide attention and brought upon the culprits severe and deserved denunciation. But most of the gentlemen who were involved were able later to renovate their reputations, and their misdeeds were apparently forgiven, and perhaps largely forgotten.

Nevertheless, we have today such legislation as pure food laws to prevent adulteration, organizations such as "better business bureaus" and movements such as "truth in advertising" campaigns to combat misrepresentation, and such bodies as the Federal Trade Commission to police some of the main arteries of business. The existence of agencies of these kinds, designed to whip into line those who seek to gain unfairly at the expense of the public, is in itself sufficient evidence that it is possible for business men, if unhindered, to make profits through engaging in predatory practices.¹

SOME CONCLUDING OBSERVATIONS

The Temporary Nature of Profits. Our examination of the causes leading to net profits has indicated the unstable nature of this share in distribution, as compared with the greater stability of rent, wages, and interest. Profits are often brought about by conditions that are wholly beyond the control of the enterpriser. For some reason or other, the selling price of a commodity is higher than the costs of production, and enterprisers reap a profit; or, on the contrary, the price happens to be lower than costs and enterprisers are obliged to take a loss.

But these discrepancies between costs and selling price, though they may never be wholly eradicated, are usually in process of being wiped out. In our study of price determination, we noted the effect, upon future production, of a condition of market supply and demand that resulted in profit or loss, as the case might be. We may repeat, at this point, the simple statement that when an industry as a whole enjoys profits, these profits attract the attention of business men seeking opportunities, a larger quantity of the good is produced, price is beaten down, and positive profits

¹ Those who care to learn of specific cases of fraud in modern business life will find some interesting samples in *Your Money's Worth*, by Stuart Chase and F. J. Schlink, and in the reports of the Federal Trade Commission.

tend to disappear. When, on the other hand, losses must be taken, some enterprisers drop out of the contest, a smaller quantity of the commodity is placed upon the market, and prices tend to rise sufficiently to cover costs of production. It would appear, then, that profits, both positive and negative, are a temporary phenomenon, here today, gone tomorrow, and possibly back again next week.

Average Profits and Individual Profits. In the long run, therefore, we expect to find that the profits of a competitive industry just about balance the losses of that industry. But a close examination of the situation reveals the fact that, while this is probably true for the industry as a whole, there are within the industry individual enterprisers who have profits more often than losses, and others who lose so consistently that they are forced out of business; the latter, however, are promptly replaced by other enterprisers eager to demonstrate their ability to achieve business success. Thus we have, in every line of competitive business over a long period of time, a continual weeding-out process. Of course, there is always the chance of being one of the winners; and the spirit of the optimist, and perhaps something of the spirit of the gambler that lures the public into the stock market, leads the individual into the arena of business enterprise where, though many go down in the fray, there is always a chance of making good and achieving economic success.

Profits and Unrecognized Managerial Ability. Positive net profits, it may be said once more, do not arise from the superior managerial ability of the enterpriser, except in so far as he is able to conduct a business in such manner as to yield a greater product, as a manager, than he could secure in the form of wages of management if he were to hire himself out to another enterpriser.

He might, for example, as a manager contribute to his own business \$25,000 worth of product, and yet be classified by outsiders as a \$20,000 man, and be able to command no more if he worked for another. In such event, the \$5000 extra that he realizes through conducting his own business is a payment contingent upon the ownership of the business, and is therefore net profits. As owner he is residual claimant, and is able to collect the full marginal product of his managerial ability, part of which he would lose if he were not in business for himself.

There is the further possibility that the greater freedom of action enjoyed by the able manager who runs his own business may result in gains that could not be realized if he were an employee of another enterpriser. If in business for himself, he might, for example, pursue an enlightened labor policy which would win the loyal and enthusiastic support of his workers and result in low unit costs of production. But when he served as a hired manager, this labor policy might be vetoed or hampered, and the good will and cooperation of the employees be lost as a consequence. His contribution as manager would, of course, be greater in the former

than in the latter instance. The difference, since it would not be collectible in wages of management, would be net profits. All gains, therefore, that are attributable to unusual managerial ability which brings to the manager no additional income unless he is engaged in business on his own account, must come under this same heading.

Profits are a return for the assumption of the ownership of business.

Gross profits are the difference between the total receipts and total expenditures of a business.

Net profits are gross profits less deductions for the use of land, labor, or capital that the enterpriser has invested in the business.

1. Define "profits."
2. Distinguish between "gross profits" and "net profits."
3. Give a synonym for "net profits."
4. To which kind of profits does the economist usually refer?
5. How does it happen that wages, rent, and interest are sometimes included by business men in their profits?
6. If profits, as estimated by business men, include any elements of wages, rent, or interest, why does the economist suggest that these items be deducted?
7. Many economists contend that profits should be thought of as a "residuum." Just what does this mean?
8. Net profits are "the return that may come to a person through the *ownership of a business*, which is not the same thing as the ownership of all, or part, of the land or capital used in the enterprise." Explain.
9. What are "negative profits"?
10. "The bearing of non-insurable risks is the special function of the business enterpriser." What kinds of risks are non-insurable? How may they lead to profits?
11. Explain the manner in which changes in price levels may bring positive or negative profits.
12. How may unpredictable changes in the supply of or demand for a commodity bring profits, positive or negative?
13. Farming is said to be an especially risky business. Why?
14. Explain how profits may result from conditions brought about by war.
15. Contrast profits in well-established industries with profits in new and venturesome businesses.
16. Do stockholders share in the profits of the business? If so, by what right?
17. We have said, in our discussion of prices, that there is a tendency for the total costs of production to equal the selling price of a given commodity. If this is true, how can profits arise?
18. How may ignorance on the part of wage earners lead to profits for business men?

19. Profits are sometimes said to be attributable in part to the fact that enterprisers make relatively long-time contracts for land, labor, and capital. Why may profits arise from the existence of long-time contracts?
20. Explain how the existence of a monopoly may give rise to profits.
21. Why is it that a business which is protected by a tariff is sometimes able to make larger profits than it would make without this protection?
22. Profits sometimes arise from engaging in predatory activities. Give several examples of such activities.
23. Distinguish between average profits and individual profits.

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PART FIVE

Labor and Standards of Living

Employer-Employee Relations

IN A CAPITALISTIC INDUSTRIAL SOCIETY, COMMODITIES AND SERVICES ARE produced under the control of business enterprisers. It is the enterpriser who assembles the agents of production—land, labor, and capital—essential to the operation of his business, and assumes responsibility for the profitable functioning of the enterprise. It is he to whom landlords, workers, and owners of capital must look for payment for the use of the several productive agents.

General Interest in Large Product. The various theories that profess to explain the distribution of income among the owners of land, labor, and capital are in agreement on at least one point, namely, that those who own these factors of production, if they are to be rewarded at all, must be paid out of the total product which results from the use of the productive agents. The larger the output produced with a given amount of land, labor, and capital, the greater is the probability of being able to collect a high price for the use of a given agent of production. In the distribution of income, as in geometry, the sum of all the parts cannot be greater than the whole. A factor of production cannot command a high price unless, through its use in combination with other agents, a large addition is made to the total product. Viewed in this way, production appears to be a cooperative enterprise, into which all parties concerned should enter with a right good will and work enthusiastically to attain the largest possible output.

Competition: The Basis of Industrial Conflict. And yet, in every economic system that operates under the rule of competition there appears to be economic conflict. Its most common manifestation is the disputes that take place between enterprisers and labor, that is, between the employers and their employees. The existence of employer-employee conflict is not difficult to explain. At its roots lies the fact that, though there may be general agreement that society should produce the largest output possible, there is quite likely to be disagreement when it comes to the distribution of that product. For it so happens that enterprisers may think it desirable to increase their profits by keeping wages down, and labor, on the other hand, may favor an advance in wages that can be had only by encroaching on profits. Employers and employees are likely to differ, also, on such matters as hours of labor and working conditions.

The tendency for every man to look after his own economic interests is one that receives abundant encouragement in a competitive society. It is pleasant to be regarded as successful, and success is commonly measured in terms of income. Hence, employers seek large profits and employees high wages; and as a consequence they come to regard their interests as antagonistic—as, indeed, in large measure they are. Thus we find in all competitive economic societies the problem of industrial conflict, which arises from economic antagonism between employers and employees and makes itself known to the general public in the form of strikes, lockouts, boycotts, sabotage, and other militant measures.

COLLECTIVE BARGAINING

Individual vs. Group Action. Industrial conflict, then, appears to be the outcome of the competitive nature of employer-employee relationships. The terms upon which employers and employees join in productive activities, like the terms which are current in every field of competition, are the result of bargaining. Now bargaining of this kind may be either *individual* or *collective*. In individual bargaining, the terms of employment are arrived at through the employer dealing with his workers *as individuals*; in collective bargaining the negotiations take place between the employer and the workers *as a group*. Bargaining individually, the worker is at a great disadvantage for several reasons, the most significant of which is the fact that to the enterpriser one employee more or less means little, but to the worker a job is a matter of the utmost importance.

When bargaining is conducted on a collective basis, however, this disadvantage disappears. The worker's need for a job is no less urgent than before, but the employer's position is considerably changed. It is no longer a question of having one worker more or less, but of being able to secure a complete labor force or none at all. For collective bargaining means, to use the slogan of the American Federation of Labor, "one for all and all for one." The workers, banded together in a union, delegate to an official (usually the business manager of their organization) the right to bargain for them; and this official, with the authority to give or withhold the total supply of labor of a given kind, is naturally able to drive a much better bargain than the individual worker trying to bargain for himself. There can be no doubt that collective bargaining, in thus strengthening the position of the wage earner, does much to bring about equality of bargaining power between employers and employees.

Equalization of Bargaining Power. The social desirability of some degree of equality in bargaining power in employer-employee negotiations becomes apparent when it is realized that the alternative is to leave the economic fate of industrial workers almost wholly in the hands of their employers. And yet there are still a good many employers in America

who hold that effective unionism is objectionable, and who oppose collective bargaining. According to the late Chief Justice William Howard Taft, such employers say, in effect: "It is my legal right to manage my business as I choose, to agree to such terms of employment as I choose, to exclude from my employment union men, because I don't approve of the tenets of the union, and to maintain a family arrangement of my own. I do fairly by my men; I pay them what I think is right, and they will not complain unless some outside union agent interferes. I run a closed non-union shop, and I am happy and propose to continue happy." Mr. Taft, who can scarcely be thought of as a radical, referred to the employer of this type as "the bourbon, the man who never learns anything and never forgets anything. . . . This man is far behind in the progress of our social civilization. . . . He does not recognize that we have advanced beyond the state in which employers and employees are mere laws unto themselves."

Labor Organization in the United States. The principle of collective bargaining has found very general acceptance in most of the older industrial countries, where the spirit of extreme individualism appears to be on the wane. In England, for example, not only are the workers encouraged to organize, but many of them also belong to the Labor Party, which was swept into power in 1945 and promptly began the nationalization of banking, mining, transportation, and other important economic activities. In the United States, labor organization has been less widespread than in England. Indeed, in certain industries (such as iron and steel manufacture, and the production of electrical goods and automobiles) there was nothing that could be called effective unionization prior to 1936, when the Committee for Industrial Organization—which in 1938 adopted the name Congress of Industrial Organizations—began to unionize the workers in these fields.

By December, 1947, the American Federation of Labor, the oldest group of organized workers in the United States today, had a membership of about 7,500,000 dues-paying workers, including John L. Lewis's United Mine Workers with some 600,000 members, who had left the A.F. of L. in 1936 but returned to the fold in 1946. However, on December 12, 1947, Mr. Lewis's union again "disaffiliated" from the Federation, thus reducing the A.F. of L. membership to approximately 6,900,000. This number includes workers in hundreds of trades. The Congress of Industrial Organizations—popularly known as the C.I.O.—claims 6,000,000 members. There are several important groups not affiliated with either the A.F. of L. or the C.I.O. The railroad conductors, engineers, firemen, and trainmen make up the four powerful "Railroad Brotherhoods," with a combined membership of 442,000, and are directed by exceptionally well-informed leaders. The Trade Union Unity League is said to have a membership of 60,000. The Industrial Workers of the World, which

aims to "take possession of the earth and the machinery of production, and abolish the wage system," has about 10,000 members, largely among the itinerant harvest hands and lumber workers of the West. Other non-federated labor groups in this country have a total membership of some 350,000, but these organizations are not of sufficient size individually to warrant special mention. We have, then, according to the best estimates that are available, nearly 14,500,000 union members in the United States. The non-agricultural workers in this country, who make up the groups that might properly be termed "organizable," total some forty-three millions.¹

Craft vs. Industrial Unionism. For many years, unionism in the United States was predominantly of the "craft" type, but since 1935 there has been a phenomenal growth in "industrial" unionism.

The craft union is an organization of workers in a given craft or trade, who join forces for the purpose of promoting the economic interests of the workers in this particular craft. The American Federation of Labor (though it has had some industrial unions) has long been the stronghold of the craft type of organization, with each union made up of workers who do a specific kind of work. The result has been separate unions of bricklayers, photoengravers, machinists, cigarmakers, and a host of other kinds of workers.

In contrast to craft unionism is industrial unionism. An industrial union includes every man and woman working in a given plant or industry, regardless of the kind of work the person does. The United Mine Workers of America (which is again, as we have already noted, an affiliate of the A.F. of L.) is an outstanding example of the industrial union. On its membership rolls are the names of miners, pumpmen, electricians, carpenters, and workers of all kinds in and around a mine. The craft union operates *horizontally*, in the sense that it may cut across many plants or even industries. The industrial union operates *vertically*, since it takes into its membership *all* workers, whether of high or low degree, in a plant or a whole industry.

For workers who have mastered a skilled trade, the craft union may be the more effective form of organization. Carpenters, for example, may be able to bargain better as members of a carpenters' union than as members of an industrial union that includes all kinds and conditions of workers in (say) a given building project or the building industry as a whole. By restricting apprenticeship and by establishing other standard regulations throughout the trade of carpentering, they may be able, be-

¹ Estimates of *organizable* and *organized* workers in the United States differ somewhat. The National Industrial Conference Board (*The Economic Almanac, 1946-1947*, p. 266) estimated the 1947 "normal" labor force at 57,712,000, of whom about 15 per cent were agricultural workers. *The United States News* (January 4, 1946, pp. 36, 37) stated that there were 14,500,000 union members in our non-agricultural labor force of 43,000,000.

cause they constitute a cohesive, limited group of skilled workers, to bargain with great effectiveness.

But the situation is different for many workers in the large-scale industries. In such instances, unskilled and semi-skilled workers are likely to be far more numerous than the highly skilled. In the field of mass production, specialization by trade has given way largely to specialization by task, and most of the tasks demand but little native ability and little training. As a consequence, a large industry may employ many thousands of workers whose skill is so slight that they have virtually no bargaining power, because as individuals (and even as separate groups) they could be readily replaced. However, when these separate groups of unskilled and semi-skilled employees join together in an industrial union, which includes also the relatively few but highly important skilled workers in a plant or industry, they become part of a strong agency for collective bargaining. In addition to the craft and industrial unions, we may note the compound-craft (or associated-craft) union, which includes the members of several crafts that have related interests; and the semi-industrial union, in which are grouped some, but not all, types of workers in a given industry.

The A.F. of L. and the C.I.O. Of the 50,000 or more local unions in the United States, a relatively few remain purely local and independent, but the locals often join city, state, and national organizations. The national union is the sovereign unit, and the national unions sometimes "control such matters as strikes, working rules, negotiations with employers, and signed agreements, leaving the locals little more than administrative and dues-collecting units."² Though autonomous within their own jurisdictions, more than 100 national unions are affiliated with the American Federation of Labor, and about 40 national unions and organizing committees are allied with the Congress of Industrial Organizations.³

The A.F. of L. had its beginning in 1886, and had held the labor field for almost a half-century when John L. Lewis, president of the United Mine Workers of America, began a movement to organize non-union workers into industrial unions. Mr. Lewis and the leaders of eight other large unions formed the C.I.O. The movement made rapid headway, and soon included many unions in the steel, rubber, automobile, petroleum, textile, and other great mass-production industries. The progress made by the C.I.O. was highly distasteful to the American Federation of Labor. Mr. Lewis and his associates were charged by President William Green, of the Federation, with attempting to set up a rival organization composed of industrial unions; and the A.F. of L. unions which had allied themselves with the C.I.O. were expelled from the Federation.

² Richard A. Lester, *Economics of Labor*, New York, The Macmillan Company, 1941, p. 577.

³ *Ibid.*, pp. 558, 593.

The struggle between the A.F. of L. and the C.I.O. has had both good and evil consequences. The audacity and aggressiveness of the C.I.O. stung the somewhat lethargic Federation into action, and forced it in self-defense to start a campaign of organization which was long overdue. In expelling the unions that were pioneers in the C.I.O., the A.F. of L. lost about one-third of its membership, but in a few years of active organizing it secured more than enough new members to make up for this loss. The substantial net gain in A.F. of L. membership, and the several millions enrolled by the C.I.O. in its first half-decade, more than doubled the total number of union members in this country, and union membership doubled again during World War II. But for this gain a heavy price has been paid. The A.F. of L.-C.I.O. conflict is no longer a battle between craft and industrial unionism. It is, indeed, the bitterest kind of a struggle for power, with each side trying to set up rival unions in fields already occupied by the other. To some observers, this split in the ranks of labor seems likely to prove a serious blow to the American labor movement.

Employers' Associations. Business men, like their employees, have often formed local, state, and national organizations, and in many cases have used these organizations to resist the workers' efforts to establish collective bargaining. It is estimated that there are more than 7000 employers' associations in the United States. The largest and most influential is the National Association of Manufacturers, which includes in its membership some 3000 manufacturing concerns, many of which are among our largest employers of labor. Allied with the N.A.M. is the National Industrial Council, which is a federation of more than 200 employers' groups, some of which are national in scope and others state and local.

Not all employers' associations engage in open and vigorous opposition to effective unionization, but many of them do. By pledging their members, under penalty, not to enter into agreements with unions; by boycotting firms outside the association if they engage in collective bargaining; by undermining and destroying unions through the agency of labor spies; by establishing blacklists of "troublemakers"; and in sundry other ways, some employers' associations try to prevent the unionization of workers or to disrupt the unions once they become bothersome.⁴ A less militant, but often effective, means of combating unionism is the introduction of "welfare" programs, health and sports activities, employee stock-ownership plans, employee representation, and other supposed "benefits" which are denounced by most union leaders as paternalistic. Of course, not all employers are unfriendly to collective bargaining, and, as we have said, some employers' associations do not actively oppose the unionization of workers. However, the attitude of the great employers' associations toward collective bargaining has, on the whole, been one of hostility.

⁴ *Ibid.*, chap. 23. The reader will find in this reference specific examples of the policies and activities of employers' associations.

UNION AIMS AND METHODS

Recognition of the Union. There can be no collective bargaining, of course, until the employer stands ready to deal with his workers on a group basis. Many long and bitter strikes have been fought in the effort to establish the right to bargain collectively. Once this concession is granted to the workers, the union seeks, through its authorized representatives, to secure as great advantages as are obtainable in the way of high wages, short hours, and favorable working conditions. These three items form the essential features of the "trade agreement," or "labor contract," the formulation and acceptance of which are the prime object of all well-regulated unions.

The Trade Agreement. The trade agreement, which is usually though not always a written contract, is a statement of the terms of employment under which the members of the union are to work. A trade agreement may extend over a short period, such as six months, or it may establish the working arrangements that are to prevail for several years. Sometimes it consists of a contract between the union and a single concern, but quite often it sets forth the union's relations to all employers in a given industry within a specified district. Whatever variations may exist in these respects, it is customary for the trade agreement to deal with those phases of the employer-employee relationship that have already been mentioned—namely, wages, hours, and working conditions.

Standardization of Wages, Hours, and Working Conditions. Of these three items but little need be said other than to point out that it is quite understandable that workers should desire high wages, short hours, and working conditions that insure safe, pleasant employment and lead to strength rather than weakness in future collective negotiations. To this end, the members of a union agree upon a standard wage, a standard day's work, and standard working conditions having to do with sanitation, discharge, apprenticeship, and a host of other matters. By adopting the principle of standardization in regard to such items, and refusing collectively to accept terms less favorable than those specified, the workers are able to avoid the disastrous competition that often accompanies individual bargaining.

The Closed Shop and the Open Shop. But it is one thing to get employers to agree to deal with their workers as a group, and quite another to achieve the acceptance and actual execution of terms of employment that are satisfactory to the members of the union. Experience demonstrates that a labor organization, if it is to win and hold the respect of business enterprisers, must be able to make a show of strength when the occasion demands. This display will be all the more imposing if the employer is confronted with the fact that his entire force of workers of a given type will go on strike if their demands are not met. Hence it is that labor leaders

do their best to put into operation the "closed shop," which means that no union man is permitted to work in an establishment that hires non-union men in his particular trade or craft. Employers, on the other hand, often insist upon the right to run an "open shop," which is one that permits union and non-union men to work side by side, presumably without discrimination.

From the point of view of sound unionism, the closed shop is obviously superior, since it means that a failure to come to terms with the union will result in the employer losing all of his workers in a given craft (or, in the case of an industrial union, all the workers in a given plant or industry) down to the last man. Defiance of the union by an employer functioning under open-shop conditions might involve the loss of a part, say a half or two-thirds, but not all of his employees. As we shall see later, it is difficult to carry on effective collective bargaining in the absence of the closed shop. Since this is true, it follows that most unions insist upon the establishment of the closed shop just as soon as they have developed sufficient strength to enforce this demand. In the early part of 1945, approximately half of all union members in the United States were working under closed-shop (or union-shop) conditions;⁵ and in 1947 Undersecretary of Labor David Morse was quoted as stating that there were closed-shop provisions in 77 per cent of the 50,000 collective bargaining contracts then in force.⁶

The Strike and the Boycott. The closed shop is a powerful aid to a union in securing the adoption and fulfillment of a trade agreement favorable to the workers. But there are other measures that can be resorted to when necessary. The most effective weapon in the hands of the union is the strike, and, as has been suggested, its effectiveness is enhanced if the union officials can call away from their jobs all workers of a given kind in an establishment, as is the case under closed-shop conditions. The boycott, a less militant weapon, is an organized refusal on the part of union workers, members of their families, and union sympathizers in general, to buy commodities or services from business concerns that have been pronounced "unfair" in their dealings with labor.

Sabotage: An Industrial "Racket." Yet another instrument which may be used to convince the employer that it would be well to grant the demands of the union is "sabotage." Webster defines sabotage as "malicious waste or destruction of an employer's property by workmen during labor troubles." The workers, instead of going out on strike, may decide to *strike on the job*, that is, to remain at work and yet see to it that the

⁵ Harold W. Metz, *Labor Policy of the Federal Government*, Washington, Brookings Institution, 1945, p. 142. In the closed shop, only union members may be employed; in the union shop, an employer may engage a non-union worker, who must however join the union in order to be in a position to accept or retain the job.

⁶ *Philadelphia Bulletin*, February 20, 1947, in "Closed Shop and the Right to Work" by David Lawrence.

employer feels their displeasure in a way that hurts. A monkey wrench slips into a costly machine and wrecks it, a batch of raw material is ruined by the addition of a quantity of acid, or a fire hose gets turned on mysteriously and soaks beyond all hope a thousand dollars' worth of finished goods. These and similar "accidents" that are calculated to bring a balky employer to terms cannot be condemned too vigorously. They do not constitute legitimate industrial warfare. Nor do the slowdown strike (in which the workers stay on the job but deliberately reduce their output) and the sit-down strike (in which they stop work entirely but refuse to leave the plant, though ordered out by the legal owners). Rather, these measures are on a par with the predatory tactics of the modern racketeer who destroys the property of any business man who refuses to buy "protection." In fairness to organized labor, it must be said that there are very few unions that deliberately engage in practices of this kind. On the other hand, there are likewise few that would not promptly and strenuously employ the orthodox strike and the boycott if their aims could not be realized through more peaceful measures.

INDUSTRIAL CONFLICT AND PUBLIC WELFARE

The Attack on the Closed Shop. The effects of union activities upon public welfare may now be examined briefly, since any sound appraisal of unionism must be based largely upon the social consequences of the labor movement. What, for example, can be said in behalf of the closed shop, which has been so bitterly attacked by certain employers? The answer given by labor leaders and by disinterested students of labor problems is that effective collective bargaining appears to be dependent upon the adoption and enforcement of the closed-shop principle.

The Weakness of the Open Shop. The Railroad Brotherhoods have proved that effective unionism is not impossible with the open shop, but in general it may be said that the open shop does not provide the strong organization and unity of action that are essential to collective bargaining. If non-union men are permitted to work in the same establishment as union workers, sharing in all the benefits of high wages, short hours, and satisfactory working conditions that have been won by union action, there is but little incentive to take out or retain membership in the union, since union members have no privileges that are not enjoyed by non-union workers, except the rather doubtful one of paying dues. Thus the attempt to maintain an open shop leads almost inevitably to loss of membership, and consequently to loss of power in collective bargaining, since the latter is based ultimately upon the ability to wage a battle in case of necessity. Many a union has come to grief through the blighting influence of the open shop, or has saved itself from ruin by shifting to the closed-shop basis before it was too enfeebled to make the move.

The Closed Union vs. the Open Union. The advocates of collective bargaining sometimes insist that the opponents of the closed shop are confused in their thinking—that they are wasting their time and effort in fighting an essential and socially desirable device of unionism, the closed shop, whereas in reality they should be concentrating their fire on the “closed union.” For the closed union holds grave possibilities of being socially harmful, since it may be used to restrict the number of workers that will be permitted to enter a given trade, and thus bring about an artificially high level of wages.

The “open union” is one which aims to enroll in its membership all workers belonging to a craft or trade, such as bricklayers, carpenters, or cigarmakers. Membership is made attractive by the establishment of small initiation fees and low annual dues, and the test of craftsmanship may consist merely of a man’s ability to secure a job from an employer. The closed union, on the contrary, seeks to limit its membership by charging high initiation fees⁷ and dues, and sometimes by requiring the candidate to pass a rigid examination in the craft in which he claims proficiency and be approved by vote of the existing membership of the union. It will readily be seen that requirements such as these can be made the means of exclusion from the union whenever its members feel that it is unwise to add to its numbers. The result is a limitation upon certain types of labor, and abnormally high wages for those types; but labor in general does not share in these wage benefits. The public, of course (including all labor that is not similarly organized), pays the bill, just as the public pays whenever an enterpriser in a monopoly position restricts the supply of his commodity and thus forces up the price. The closed union, then, may be quite as injurious to public welfare as the monopoly control of commodities or services. To control the situation, the closed union must, of course, include within its membership a large proportion of the total workers in the trade. This statement is applicable also to the open union, since neither type of union could hope to maintain a closed shop if large numbers of competent non-union workers were looking for jobs.

The Open Union with the Closed Shop. It is the open union operating under the closed-shop principle that most students of labor problems regard as the best form of labor organization that has yet been devised. If the union is genuinely open, it has no limiting influence upon the supply of labor. If the supply should be small and wages high as a consequence, there will be a tendency for workers to be attracted to the trade; and if all are to find employment the wages will have to come down, unless we sup-

⁷ “Some unions have such high admission fees that it is almost impossible for the average man, no matter how well qualified, to join. The truckers in Seattle, for instance, charge \$500. The Motion Picture Union in Cleveland grabs \$1000. And the Glaziers’ Union in Chicago demands a cool \$1500 for the right to work.”—Thurman W. Arnold, Assistant Attorney General of the United States, in *The Reader’s Digest*, June, 1941, p. 139.

pose an increase to have taken place in the demand for labor of this kind. It is in this respect that the open union is socially preferable to the closed union, as was noted in the preceding paragraph.

Having been taken into the union, the new members are perfectly free to work in the closed shop. Indeed, the union frequently acts as an employment agency for its members. Thus the combination of open union and closed shop does not deny an employer the privilege of engaging any worker who is willing to acknowledge labor allegiance to the extent of joining the union and paying dues. What it does, rather, is to set up uniform conditions of employment, make possible collective bargaining, and insure that all who benefit by the union's activities shall have a part in bearing its expenses. In a word, it provides a self-supporting agency through which the worker is enabled to overcome the handicap which he suffers when forced to bargain as an individual.

It is an interesting and important fact that most of the opposition to the closed shop when combined with the open union—or what is often called the *union shop*—comes from employers and others who have had no experience with it. Many employers have had long and successful experience with the closed shop or union shop, regard it as a stabilizing influence in industrial relations, and would be loath to give it up. However, the Taft-Hartley Act of 1947 outlawed the closed shop and placed restrictions on the union shop which may interfere seriously with its operation. Moreover, more than a quarter of the states have passed anti-closed shop laws “to protect the workingman in his God-given right of earning a living”; but the constitutionality of such laws has yet to be tested.

It will be well, at this point, to emphasize the fact that the open union with the closed shop cannot hope to win for the workers, at a given time, anything more in the way of favorable wages, hours, and working conditions than would tend to come to these workers *in the long run* and *under competitive conditions* even in the absence of a union organization. But this, after all, is a good deal. Readjustment which under individual bargaining might be effected in the “long run” can sometimes be made in the “short run” through collective bargaining; and competition, which tends to become sluggish when there are great inequalities in bargaining power, is stimulated into action when workers organize an open union and enforce the closed-shop principle. Economic theory speaks of the tendency of wages to equal the marginal productivity of the worker. An open union with a closed shop does much to convert this tendency into a reality. Functioning properly, it enables the worker to secure his *full competitive wage*, which he can seldom secure without collective action. Similarly, it enables him to command his full competitive share of short hours and good working conditions. Collective bargaining of this kind is valuable, then, in obtaining for the worker those benefits to which the existing conditions of supply and demand entitle him—benefits which he is usually unable

to secure, however, when he is compelled to contend individually with the superior bargaining force of the employer.

Limitation of Output. Unions are often charged with restricting output by insisting that their members turn out no more than a specified number of units of product per day, or, again, by fighting for a shorter working day or week. It is true, unquestionably, that unions do endeavor to cut down the amount of time that workers shall be compelled to give to industry. Owing largely to union pressure, working hours have been reduced from twelve to ten, and again, from ten to eight in a great many businesses, and there is much talk of still further reductions. In some instances, indeed, these further reductions have already been made. The United States Bureau of Labor Statistics reported, for example, that in 1928 there were thirteen crafts in this country that were on the 40-hour week in one or more cities. With the introduction of the so-called "New Deal" in 1933, the working week of American workers in general was shortened materially, in some instances being reduced to thirty hours. According to the National Industrial Conference Board, the *average* actual working week of the employees in twenty-five manufacturing industries was 38.7 hours in 1937, but this figure rose, under the stimulus of war, to 45.6 in 1944.⁸ It is probable that, in most trades, a shortening of the working day and week does not bring a proportional loss in production. It is certainly true, as has been proved by actual tests, that a reduction in working time *may* result in a larger rather than a smaller output per dollar of wages paid. There is serious doubt, however, that the working week could be reduced to thirty hours without loss of output; but in any case it seems reasonable that the workers should share in industrial progress not only through the receipt of larger wages, but also in the enjoyment of greater leisure. This, at any rate, is the stand taken by labor leaders, and it is one that is not easy to combat. The 40-hour week has been widely adopted in the United States,⁹ and the 30-hour week has had the endorsement of American organized labor.

Regardless of the exact number of hours to be worked, should not each worker be expected to produce his maximum output per hour or day? The business man's reply is usually an emphatic affirmative, but the spokesmen for the unions raise several objections to this conclusion. They point out that it is the duty of the union to safeguard the business interests of *all* its members; that if every worker produced to the utmost of his capacity the employer would try to make the output of the *best* worker the standard task for the group; and that under these conditions the *average* worker would be "sweated"—that is, worked far beyond a reasonable point, and

⁸ *The Economic Almanac, 1945-46*, New York, National Industrial Conference Board, 1945, p. 197.

⁹ Note, in this connection, the 40-hour maximum placed upon firms engaging in interstate commerce, as provided in the Fair Labor Standards Act of 1938, which is outlined later in the chapter.

perhaps beyond his powers of endurance. The remedy, from the union point of view, is standardization of task, and this means almost necessarily a standard task that can be attained by the average worker. It is better, the unionists believe, for a few men to be underworked than for many to be sweated.

This argument may not appear wholly convincing to a consuming public that has to pay somewhat more for its commodities and services under union regulation than would be charged if employers were free to drive their workers. But unionists can point to many instances of exploitation of labor in the absence of standards set up and enforced by collective bargaining. In the face of the apparent necessity for the protection of workers in this respect, it is difficult to make out a strong case against the standard task, unless the standard that is set is ridiculously low. So long as there is conflict of interest between employers and employees, the workers can scarcely be expected to surrender a powerful weapon of defense such as standardization has proved to be, even though its retention may involve some loss to society at large.

Business Men's Practice of Limitation. Restriction of output, incidentally, is a subject in which some business men could easily give lessons to workers. It is certainly not demonstrable that enterprisers feel impelled always to turn out the maximum amount of product. On the contrary, it is a very common practice—and, it may be added, a thoroughly respectable one in business circles—to manipulate output in a manner dictated by the enterpriser's economic interest, that is, on the basis of profit. If a large output gives promise of the maximum profit, a large output will be produced; but if more is to be made by restricting output, business men ordinarily do not hesitate to engage in restrictive practices. This statement is not intended by way of justification of limitation of output by either employers or employees. It is merely a statement of fact, designed to indicate that if standardization by unions *incidentally* brings about restriction of output, it should not on that account be condemned too heartily until we have successfully disposed of *deliberate* limitation of output on the part of business enterprisers.¹⁰

One form of restriction practiced by business men is the purchase and "shelving" of patents on new machinery which, if put into use at once, would reduce the costs of production of certain commodities and permit their sale to the public at lower prices.¹¹ The reason for wishing to delay the introduction of the cheaper processes lies usually in the existence of capital (that is, machinery) which has in it some years, and often many years, of further usefulness. It is often good business, from the enterpriser's

¹⁰ See, in this connection, Thorstein Veblen, *The Engineers and the Price System*, New York, The Viking Press, 1921.

¹¹ See Floyd L. Vaughan, *Economics of Our Patent System*, New York, The Macmillan Company, 1925, chap. 6; also, *The United States in a New World*, supplement to *Fortune*, December, 1942, p. 12.

point of view, to postpone the use of the improved device until the existing equipment has worn out, even though the postponement is costly to the consuming public.

Labor's Opposition to New Machinery. A parallel to this type of restriction is found in the opposition of unionists to the introduction of labor-saving devices that threaten to take away their jobs, or that at best are likely to force them to accept wage reductions. Thus, the Journeyman Stone Cutters' Union fought bitterly the mechanical planing of stone, the Glass Blowers' Union opposed the introduction of the Owens bottle-making machine, and the American Federation of Musicians has battled and is still battling against the "canned music," recorded and reproduced by mechanical devices, which, if its use went unrestricted, might virtually wipe out the demand for theatrical and radio orchestras.

It may be that methods will be found for the gradual replacement of old machinery by new, with only slight loss to business men through the scrapping of usable capital, or to labor through the obsolescence of acquired skill. On this point we shall have more to say in Chapter 25. For the present, it is not inappropriate to quote the old proverb, "What is sauce for the goose is sauce for the gander," and to suggest that it is scarcely consistent to condemn skilled workers for opposing the installation of new machinery unless we are equally critical of business men who buy up and smother patents on new and better processes in order to avoid the sudden obsolescence of industrial capital.

Unemployment and Restriction of Output. Another cause of limitation of production indulged in by both organized and unorganized workers is the fear of being laid off temporarily. This, again, is a subject with which we shall deal in our treatment of economic insecurity. But it may be observed here, in passing, that to most industrial employees, union and non-union alike, the paramount issue in life is getting and holding a job. This being true, it is not surprising that the possibility—even the remote possibility—of layoff through a lack of work should lead workers to indulge in "soldiering," that is, producing less than could be produced in a given time, in order to make the job last just as long as possible.

He would be a self-denying worker, indeed, who deliberately worked himself out of a job by producing the maximum output, when by lessening his efforts he could be sure of drawing wages over a longer period of time. Society suffers, of course, by the adoption of such tactics; but perhaps a society that does not attempt seriously to solve the problem of layoffs should not complain if its neglect of the problem carries the penalty of high prices through limitation of output. At any rate, as we have noted, soldiering on the job in order to delay the evil day of unemployment is by no means confined to unionists. It is practiced consistently by all workers who believe in that cardinal principle of the competitive system—that it is the duty of every member of society to seek first his own self-

interest. Certainly, all restriction of output is bad, whether practiced by employers or employees, but the means have not yet been found for abolishing restriction under the institutions of our economic system.

The Use of the Strike. The strike is a concerted withdrawal of workers from an establishment, and is a move designed to force an employer to grant his employees better terms than those under which they have been working, or to compel him to withdraw an unpopular ruling such as a cut in wages or an increase in hours. The strikers are always hopeful that their action will cause the employer to concede the point at issue and thus make possible the resumption of business relations and operation of the plant. A strike does not mean, then, that those who take part in it have relinquished all claim to their jobs. On the contrary, workers on strike invariably regard the temporarily abandoned jobs as belonging distinctly to them; and the acceptance of this idea is fundamental, for otherwise the employer might hold that there was no strike in progress and hence no need for negotiation. It follows that workers on strike object most strenuously to any attempt of the enterpriser to replace them with a new working force. Probably no one in the industrial world is more thoroughly despised than "strikebreakers"—the workers who are sometimes hired temporarily by an employer in the effort to discourage the strikers and get them back to work on his own terms.

Public Attitude Toward the Strike. Non-union workers have been known to go on strike; but since success in this phase of industrial conflict demands united action, it is among the unionists that strikes are most common and most effective. The strike is the most spectacular form of industrial warfare; and since the workers, in going on strike, take the initiative and act as aggressors, it is perhaps to be expected that the general public should jump to the conclusion that strikers are troublemakers, that their demands are probably unreasonable, and that they are entitled to little sympathy. Though the accounts of strikes as written by newspaper reporters are likely, on the whole, to be fairly impartial, they are sometimes modified at the request of the advertising department. Certainly the editorial columns often reflect the economic views of the publisher, and the indignation of the outraged employer and irritation of the local police, instead of presenting an unbiased and dispassionate analysis of the situation giving rise to the strike.

The attitude of society toward the strike and strikers is affected by the fact that recourse to this weapon often brings inconvenience, and sometimes actual suffering, to the consuming public. An actors' strike means closed theaters, a railway workers' strike brings interruptions in transportation, a miners' strike forces the use of bituminous coal and coke in place of the desired anthracite, and so on. Particularly in the case of public utilities is it easy for incommoded consumers to get the notion that the strike is an evil institution, and that those who invoke and prosecute it

are enemies of society. Whether the public's interest in securing an uninterrupted supply of commodities and services should lead to the outlawry of the strike is a question to which we shall give some attention later in the present chapter.

Economic and Human Costs of the Strike. The inconvenience experienced by consumers when workers go on strike is only one of the many costs imposed upon society by industrial strife. This is a form of cost that cannot be measured with any degree of accuracy. Probably we are justified in suggesting that strikes do not, as a rule, cause the public any great amount of suffering. And yet the possibilities of injury to health through the non-delivery of such essentials as milk or coal, to life and property in the event of a strike by the police or other public servants, and to national safety if there is a stoppage of work in airplane or munitions plants, cannot be ignored.

In the editorial comments on strikes, much is usually made of the economic costs borne by workers in the loss of wages and by employers in the loss of profits. These costs are often exaggerated, and yet, despite the absence of exact data, we know that they run into many millions. According to some estimates, in the General Motors strike of 1945-46, the workers lost in wages during the strike more than the contested amount would total in five years of post-strike employment; but this was scarcely a typical case, and in any event it is possible that the *long-run* benefits of the strike more than justified its cost to the strikers. According to the Bureau of Labor Statistics, there were 20,150 strikes in the United States in the decade from 1930 to 1939, inclusive, with a total of 9,109,789 workers involved, and a loss of 121,919,804 man-days. If the average wage was only five dollars a day, the loss in the earnings of workers was \$609,599,804—and this quite apart from the enormous losses the employers must have suffered. Though these losses bulk large in the aggregate, they are less imposing when spread over the years in question and divided among the millions of workers. Indeed, we find that these strikers lost, on the average, slightly less than \$67 apiece in the ten-year period. This may have been far less than the average gain realized by the workers through going on strike, though on this point we have no information. Nevertheless, since the figures represent pure *social* loss, they suggest the economic desirability of the elimination of strikes.

Yet another social cost chargeable to strikes is the loss of life that occasionally accompanies militant activities in industry. When strikers are lined up on one side of the contest, straining every nerve to win a victory that will insure satisfactory, remunerative jobs, and armed guards, detectives, and strikebreakers are arrayed against them, it is not an easy matter to prevent violence. Indeed, in view of the opportunities for trouble that such a situation presents, surprisingly little violence occurs in connection with strikes. There are, to be sure, such bloody encounters as the "Ludlow

massacre" and the "Herrin massacre," in which there was wholly inexcusable loss of life.¹² In the main, however, American strikes have been conducted with comparatively few fatalities.¹³

The Industrial Lockout. The "lockout" is much less spectacular than the strike, but it constitutes aggressive warfare on the part of the employer, just as the strike is an act of aggression initiated by the workers. In the lockout the employer closes his doors and does not open them again until the workers come to him suing for peace and ready to accept his terms of employment. This action, it will be observed, has precisely the same social consequences as a declaration of strike by the workers; that is, it immediately puts a stop to production and thus interferes with society getting the goods it wants. The strike and the lockout are alike, moreover, in purpose. The object of each is to force the party against whom it is directed to agree to terms dictated by the aggressor, whether the latter is an employer or a union. The strike and lockout are so similar in purpose, in method, and in social consequences that it is scarcely possible, with consistency, to oppose one and at the same time endorse the other.¹⁴

EMPLOYER ATTITUDES TOWARD UNIONISM

The Open-Shop Movement. A good many American employers regard collective bargaining as desirable and inevitable, but this attitude is far from universal. Much of the opposition to unionism has been passive, but some large-scale employers of labor have taken an active part in the fight by joining in the "open-shop campaigns" waged by such organizations as the National Association of Manufacturers, the Chamber of Commerce of the United States, and the National Metal Trades Association. By means of addresses made by paid speakers, large-scale newspaper advertising, and the distribution of tons of printed matter, the "American" open

¹² At Ludlow, Colorado, on April 19, 1914, a group made up of militia and mine guards—the latter in the pay of the Colorado Fuel and Iron Company—opened fire on a tent colony of striking miners, and a few hours later burned these temporary homes of the miners to the ground. Twelve children and two women lost their lives in this "massacre." At Herrin, Illinois, during a strike against the Southern Illinois Coal Company, three union workers were killed in a pitched battle between strikers and mine guards on June 21, 1922. On the following day sixteen of some sixty strike breakers who had surrendered were killed by an armed mob, despite the fact that they had been promised safe conduct out of the county.

¹³ The problem of wartime and post-war strikes is discussed later in the present chapter.

¹⁴ "I do not perceive any distinction upon which a legal difference of treatment should be based between a lockout, a strike, and a boycott. They often look very unlike, but this litigation illustrates their basic identity. All are voluntary abstentions from acts which normal persons usually perform for mutual benefit; in all the reason for such abstention is a determination to conquer and attain desire by proving that the endurance of the attack will outlast the resistance of the defense." J. Hough, in *Gill Engraving Company v. Doerr*, 1914 (quoted in Charles O. Gregory, *Labor and the Law*, New York, W. W. Norton & Company, Inc., 1946, p. 105).

shop has been lauded and the "un-American" closed shop roundly condemned.

To the charge that the closed shop is un-American, the unionists retort that, on the contrary, it is as distinctively American as any institution could possibly be. They insist that there can be nothing even approximating democracy in American industry unless the workers are strongly organized, and that powerful unions are out of the question in the absence of the closed shop. They argue, further, that the closed shop is democratic and American because it forces all who benefit by union activities to pay dues, and thus to contribute to the costs of achieving progress, whereas the open shop allows the unionists to pay the bills, while non-union workers, who are equally well off financially, enjoy the benefits gained through union efforts but make no payments.

In these verbal disputes, it would seem that the unionists have the better of the argument. They have found the weak spot in the armor of those employers who profess to believe in unionism but who specify that it must be a unionism which, by its very nature, is so weak as to be virtually useless. When employers talk about endorsing unions and yet insist upon the open shop, they indicate that they are looking for credit without performance—that they are seeking a reputation for friendliness to organized labor, while in reality they are antagonistic to the development of union power—for effective unionism is practically impossible in conjunction with the open shop.

The Company Union. The "employee representation" movement, which has developed in the United States during the past thirty years, is regarded by many as an attempt to weaken unionism of the militant type by the introduction of a harmless variety known as the "company union." The company union is one that comes into being with the full consent of the employer; and prior to the passage of the National Labor Relations Act it was ordinarily initiated and financed by him. Under company unionism, or employee representation (for the terms may be used interchangeably), the workers in a given establishment elect representatives from among their number to meet at stated times with representatives appointed by the employer. At these meetings it is possible to raise questions of hours, working conditions, and (in rare instances) wages. The theory is that through these friendly councils the wishes of the workers will become known, misunderstandings cleared up, abuses remedied, and a spirit of cooperation built up.

A survey of the situation shows that company unionism has been successful in improving labor relations in some instances, and has met with failure in others. It has been warmly endorsed by many employers and by some disinterested students of labor, but is openly and bitterly condemned by the independent unionists. The strongest argument against the company union is the impotence of its members in the face of opposition on

the part of the employer. Unlike the independent union, it is not able to press its claims when they run counter to the employer's wishes.

Employee representation does provide a means of frequent intra-plant conference which may be a valuable aid to production and the maintenance of good will. It lacks, however, that prime essential of true democracy—"power in the hands of the people"—and it is largely because the company union leaves its members powerless in time of emergency, and dependent upon the benevolence of the employer, that it has aroused the enmity of thoroughgoing unionists. The unionists, moreover, regard the employee representation movement as a device for undermining strict unionism. They have watched with apprehension its gain in adherents. According to the best estimates available, workers to the number of two to three million now belong to company unions in the United States. This does not mean, however, that these are workers who have deserted independent unionism and gone in for company unionism. They are, for the most part, workers who were formerly unorganized and who now appear under the company-union banner because their employers have put into operation systems of employee representation. Nevertheless, the orthodox unionists have always regarded company unionism as a threat to independent unionism, and have fought it vigorously ever since its inception.

The "Yellow-Dog" Contract. One very objectionable feature of certain employee representation plans, from the traditional union point of view, was the requirement that every worker sign a contract agreeing that, while in the employ of the concern, he would not join a trade union, and sometimes even promising not to associate or confer with union leaders or members during his term of employment. To this type of contract the independent unionists gave the name "yellow dog," because (to quote an official statement of the American Federation of Labor) this contract, "like the proverbial alley cur, is a menace to the community in which it exists."¹⁵ Whether this statement is strictly accurate or not, there can be no doubt that at one time the yellow-dog contract constituted a distinct menace to unionism. Not only could a company, by virtue of this contract, discharge an employee who violated his agreement by joining a union, but employers sometimes succeeded in having court injunctions issued, restraining union representatives from attempting to organize their employees on the ground that to undertake such organization would be an attempt to induce breach of contract.

The leaders of labor promptly recognized the fact that if the yellow-dog contract were allowed to stand, and if it were used to prevent union organizers from carrying on their work, it would be a real blow to unionism. Hence, they marshaled their forces against it, and were able

¹⁵ *Report on Proceedings of Forty-seventh Annual Convention*, October, 1927. Washington, American Federation of Labor, p. 291.

in this struggle to enlist on the side of labor the hearty support of a large part of the general public. A half-dozen states passed laws declaring the yellow-dog contract unlawful. Several state supreme courts pronounced such legislation constitutional, but others declared it unconstitutional. The Supreme Court of the United States, in passing on a similar issue in 1917 and again in 1921, apparently upheld the legality of the yellow-dog contract, basing the decisions on the "freedom of contract" provisions of the Constitution.

In 1929 and later years, many of the states passed laws which, while they did not forbid the use of yellow-dog contracts, made such contracts unenforceable in the courts. The Norris-La Guardia Act of 1932 declared such contracts to be contrary to the public policy of the United States and non-enforceable in the federal courts. The National Labor Relations Act, passed in July, 1935, forbade the use of yellow-dog contracts by firms engaging in interstate commerce. This Act was declared constitutional by the United States Supreme Court in 1938.

The Labor Injunction. We have referred to the use of judicial injunctions in connection with the enforcement of the yellow-dog contract. This was one of the most serious applications of the injunction to labor disputes, but it was, after all, only one of the many uses to which the "labor injunction" has been put.

Intended originally to protect property from irreparable damage during a strike or boycott, the injunction has been called upon to perform a much wider service. Union workers and officials have at times been forbidden, by court order, to urge non-unionists to join a union even in the absence of a "yellow-dog" contract, to picket, to publish information regarding the progress of a strike, to pay strike benefits, or to perform any other act which might, in the opinion of the court, lead to certain undesirable results. Obviously, injunctions of this type, if observed, destroy almost completely the power of the strike; for employers can always find accommodating judges ready to issue injunctions that will bring all strike machinery to a stop. One of the most serious consequences of this alleged abuse of the power to enjoin is a widespread loss of confidence in the integrity of the courts. It is getting to be a commonplace among working people that the courts and the police authorities are always to be found on the employer's side in an industrial dispute.¹⁶

The frequent use of judicial injunctions in industrial conflict was long a source of great anxiety to labor leaders. The Norris-La Guardia Act of 1932, to which we referred in our discussion of the yellow-dog contract, is sometimes called the "Norris-La Guardia Anti-Injunction Act," because its provisions restrict the use of injunctions in industrial disputes. This Act prohibits the issuance of restraining orders except under unusual circumstances, and then for periods longer than five days. No injunction

¹⁶ Paul F. Gemmill, *Present-Day Labor Relations*, New York, John Wiley & Sons, Inc., 1929, p. 17.

may be granted without an oral hearing in open court. A person charged with contempt in connection with the violation of an industrial injunction is entitled to trial by jury, unless the contempt was committed in the presence of the judge, and he has a right to be tried by a judge other than the one who issued the injunction. There are further provisions in the Act designed to protect the workers' rights in labor disputes.

The National Labor Relations Act. The National Labor Relations Act (or Wagner Act), which we have mentioned several times in the present chapter, requires employers to bargain collectively with the representatives of their employees, and prohibits employers from interfering in the organization of agencies for collective bargaining and from engaging in unfair labor practices. It provides for the administration of the law by the National Labor Relations Board, which has the power to investigate, to settle disputes, to issue orders to employers, and to have these orders enforced by the federal courts.

The Act was designed to encourage the speedy organization of workers into bargaining groups, and to require employers to bargain collectively. Its success in this respect is indicated by the enormous increase in union membership which followed the enactment of the law in 1935. Any attempt on the part of employers to interfere with the operation of the Act may be made the subject of a hearing by the Board, which, if it sees fit, may then issue a "cease and desist" order against the offender. "It deals with only one segment of labor policy," explains one writer. "Its limited purposes are to protect employees against employer interference with their right to form and join labor unions, and to encourage collective bargaining between employers and bargaining agents representing a majority of employees in an appropriate bargaining unit."¹⁷ By the very nature of the Act, the disputes handled by the Board are charges of unfair practices brought against employers, and not the usual labor disputes centering about wages, hours, and conditions of work. On this account, the Act and the decisions of the Board have often been called "one-sided"—and this they clearly are, in the sense that they make demands upon employers but not upon workers. The answer is that the obvious intent of Congress in passing the Act was to lessen the inequality of bargaining power as between workers and employers, and that this could be done only by strengthening the former at the expense of the latter.

Despite the charge of one-sidedness there is evidence that the National Labor Relations Board has not dealt out justice with undue harshness. In its first five years of operation, more than 95 per cent of the complaints registered with the Board were disposed of by withdrawal, dismissal, settlement, or compliance. Of the comparatively few cases which were appealed

¹⁷ Ludwig Teller, *A Labor Policy for America*, New York, Baker, Voorhis & Company, Inc., 1945, pp. 36, 37.

to the Supreme Court during this period, the Board's judgments were fully sustained in twenty-three cases, partially sustained in five, and overruled in but two.¹⁸ In a three-year war period ending September, 1944, 82 per cent of the cases handled by the Board did not require the invoking of formal procedure, and eight of the nine cases that reached the United States Supreme Court were decided in the Board's favor.¹⁹ This record would seem to suggest that the Board has administered the Act with restraint. It may also be noted that one of the few agreements which came out of the government-sponsored Labor-Management Conference, held in Washington in the latter part of 1945, related to the Labor Relations Board. In opposing the proposed absorption of the Board by the Department of Labor, management and labor agreed upon the following significant statement: "To the end that the National Labor Relations Board may be enabled best to perform its functions in the prompt and impartial determination of representation questions, the Board should remain as an independent agency, and should be provided with adequate appropriations." Finally, we may record a conclusion reached by the Editors of *Fortune*, based on a survey conducted early in 1947: "A solid majority of those with formulated opinions would be against abandoning the basic philosophy of the Wagner Act. . . . Pluralities or majorities in every occupational group (among executives and professional men 55 per cent) register approval of labor's rights, always excepting farm owners, the majority of whom reject them."²⁰ Nevertheless, this Act was largely superseded by the passage, in June, 1947, of the Taft-Hartley Act, which will be described briefly later in the present chapter.

Federal Legislation on Wages, Hours, and Child Labor. The Fair Labor Standards Act of 1938 (often referred to as the Wages and Hours Law) became effective on October 24 of that year. Its purpose is to protect, to some extent, low-income workers who find it especially difficult to protect themselves because they lack bargaining power—or, as its sponsors are fond of saying, the Act aims to put "a floor under wages and a ceiling over hours."

The Act made it unlawful for an employer whose products move in interstate commerce to pay less than 25 cents an hour, or to work an employee more than forty-four hours a week without payment of "overtime" in cash at the rate of "time and a half." After one year, the maximum hours were to be reduced to forty-two a week, and the minimum wage raised to 30 cents; and this process was to continue until 1945, when the maximum hours would be forty a week and the minimum wage 40 cents an hour. However, the administrator of the Act was empowered to appoint industrial committees to investigate conditions in specific industries

¹⁸ Richard A. Lester, *Economics of Labor*, p. 722.

¹⁹ *Labor Fact Book 7*, New York, International Publishers, Inc., 1945, p. 118.

²⁰ *Fortune*, March, 1947, p. 20.

and, upon recommendations of these committees, to order more rapid decreases in maximum hours or increases in minimum wages.

The Act also dealt with the subject of child labor, specifying that in industries engaged in interstate commerce no child under sixteen years of age could be employed, and none under eighteen years could be employed if the work was "hazardous or unhealthy."

It is estimated that the Act affected, in the first year of operation, some 750,000 workers as regards wages, and about 1,500,000 in the matter of hours. As time passed, the progressively lower maximum hours and higher minimum wages have brought additional groups of workers under the law; and the tendency to amend the Act by raising the minimum wage makes it fairly clear that many millions of workers will eventually benefit. However, this Act, like the Social Security Act (which we shall discuss in Chapters 25 and 26), falls far short of universal application. For it exempts from the provisions of the law employees engaged in administrative, executive, professional, local retailing, and outside selling activities; employees of retail or service establishments when predominantly intrastate in character; seamen, fishermen, agricultural workers, employees of air transport companies, street car or bus lines, and certain other businesses.

An immediate reaction to the enforcement of the Act was the discharge of some extremely low-paid workers in the pecan-shelling industry (which had been paying as little as five cents an hour, and from \$2.00 to \$2.50 for a full working week), and in certain tobacco plants, lumber mills, and clothing factories, chiefly in the South. It is perhaps inevitable that some permanent layoffs will follow the enforcement of any minimum wage law, for there are bound to be industries which find it impossible to pay the minimum. There is also the possibility that the enforced higher wages will bring about the invention of labor-saving devices which will lead enterprisers to employ more machinery and fewer workers. On the other hand, the minimum wage unquestionably strengthens the hand of socially-minded employers who, though anxious to pay their workers a fair wage, have been unable to do so because of the cut-throat competition of "chiseling" enterprisers in the same lines of production. The *Fortune* survey, already cited, says of this Act: "Majorities in every economic group are for it, although the prosperous are most inclined to favor competition as the sole guide to wages (36 per cent as opposed to 58 per cent for a minimum wage), the poor most in favor of a legal floor (73 per cent for, 13 per cent against). In the occupational breakdowns, the only group not overwhelmingly in favor of a minimum wage are parity-protected farm owners (48 per cent for, 46 per cent against), whose workers regret that they are not included in present legislation."²¹

²¹ *Ibid.*, p. 18.

WARTIME AND POST-WAR LABOR PROBLEMS

In mechanized warfare, the workers who man the machinery of production are quite as necessary as the fighters who man the tanks, ships, and planes that engage in combat. Their work is less exciting, less dangerous, and better paid than service in the army, navy, and air force; but the deferred ratings given in World War II to workers in certain occupations is ample recognition of the essential part played by industrial workers. The basic principle of sound business management—to employ every worker in such a way that his ability will be utilized to the fullest—is equally good practice for a nation at war. Manpower is always important when there is work to be done, but it is doubly important in wartime. The failure to make full use of the available human resources weakens a country's war effort, and may prove very costly by delaying the day of victory.

Labor Shortage and the War Manpower Commission. In April, 1942, President Roosevelt created the War Manpower Commission "to establish basic national policies to assure the most effective mobilization and maximum utilization of the nation's manpower in the prosecution of the war." On December 6, 1942, an Executive Order gave the Chairman of this Commission almost dictatorial authority over the people of this country. The Commission was empowered to decide who should work, where, and at what task, and whether he should or should not serve in the armed forces. The Selective Service System was placed under the War Manpower Commission, which was given the duty of providing men for the armed forces through the System, was made responsible for training workers for vital industries, and had other important functions to perform.

The necessity for centralization of direction in the utilization of manpower, and the substitution of compulsory for voluntary compliance with directives, arose with the growing acuteness of the labor shortage problem in many parts of the country. Among the specific causes of the faulty utilization of American labor were the following: "(1) workers changing jobs for higher pay; (2) employers failing to use workers effectively; (3) inadequate housing and transportation facilities, causing large turnover of workers; (4) employer prejudices in hiring workers; (5) labor piracy; (6) lack of comprehensive training programs to supply vitally needed types of skilled and unskilled labor; and (7) over-concentration of war contracts."

By classifying occupations as "non-essential" or "essential" (and as "non-deferrable" or "deferrable" in their relation to active military service), by encouraging workers to shift from the former to the latter type of jobs, by specifying the conditions under which a worker might move from one job to another, and in other ways, the War Manpower Commission under-

took to utilize the labor force of the country for expediting the prosecution of the war. The manpower problem was not confined to the production of war equipment but was apparent in nearly every branch of economic activity. It was especially serious in agriculture, from which large numbers of men had been drawn into combat service and "essential industries." The threat of a crippling shortage of farm labor emphasized the highly essential nature of agriculture in time of war—especially in a war in which we had to feed not only our armed forces and civilians, but also, to a considerable extent, the people of all the United Nations.

Labor Relations in Wartime. Doubtless the thought uppermost in the minds of American employers and employees during World War II was the necessity of winning the war. There is no reason to question the patriotism of either of these groups, and it seems fair to say that enterprisers and workers alike stood ready to make whatever sacrifices were required to bring victory to the Allies. But probably very few individuals were anxious to make greater personal sacrifices than were necessary, and fewer still were willing to deny themselves comforts while others were indulging in unwonted luxuries. Carrying on war production in a capitalistic state is almost certain to lead to confusion and misunderstanding, because some individuals seem to gain at the expense of others or of society as a whole. An increase in demand without a corresponding increase in supply brings excessively large war profits to certain business concerns and excessively high wages to some classes of workers. Employers are appalled at the cupidity of the relatively few workers whose bargaining position in time of war enables them to double their wages, and workers are equally astounded when they hear of occasional profits so huge that large bonuses are given to even minor executives in order to avoid the payment of high excess profits taxes.

War does not alter the general nature of labor's objectives. In wartime as in time of peace, workers are interested in getting high wages, short hours, and satisfactory working conditions. World War II brought higher hourly rates, and larger weekly incomes, in many industries. This was particularly true, of course, of shipbuilding, machine-tool manufacture, and other war industries, in which the government paid the bill for the products, and *paid well* to induce speedy delivery. Employers in ordinary industries were often compelled to raise wages in order to hold their labor force. However, wage increases did not always keep pace with the cost of living, so that the real wages of some workers showed a decline during the war period. Hours of labor, too, increased somewhat but without serious protest from the workers, since premiums were usually paid for work in excess of 40 hours a week.

Wartime Industrial Strikes. The desire of workers or employers to gain advantages which were not willingly granted is indicated by the strikes that occurred in the period of accelerated war production. Or-

ganized workers were not slow to demand wage increases which they said were warranted by the increased cost of living and could readily be paid from the substantial profits being reaped by their employers. Some employers, on the other hand, did not hesitate to charge that the workers were using the war situation to get higher wages, with the implication that a lack of patriotism was involved. This implication was no more applicable to workers than to those employers who took advantage of the same war situation to increase their profits. Of course, neither group was responsible for bringing about the conditions that made high wages and large profits possible. The truth is that both high wages and large profits arise almost inevitably out of a state of war, and this condition is certainly not chargeable to either labor or business enterprise. However, the workers' gains do not necessarily come without a struggle. Wartime competition among employers who need scarce labor may lead to voluntary grants of wage increases and other concessions, but the war-production strike record given in Table 25 shows that industrial conflict does not declare a truce in wartime.

TABLE 25. STRIKES IN THE UNITED STATES, 1939-45
(Source: United States Bureau of Labor Statistics)

Year	Number of Strikes	Workers Involved	Man-Days Idle
1939.....	2613	1,170,962	17,812,219
1940.....	2508	576,988	6,700,872
1941.....	4288	2,362,620	23,047,556
1942.....	3060	707,000	4,475,000
1943.....	3072	1,981,279	13,500,529
1944.....	4956	2,116,000	8,721,000
1945.....	4750	3,467,000	38,025,000

These figures may be compared with the ten-year average for 1930-39, which show in that decade an annual average of 2017 strikes, with 911,575 workers involved, and 14,262,700 man-days idle. (In World War I there was an annual average of about 3000 strikes during the seven-year war and post-war period.)

The National War Labor Board. Idle manpower is bad enough at any time, since the failure to make full use of human resources results in a smaller national income than would be available if all labor were at work. But idle manpower in wartime may bring national disaster by limiting the quantity of war materials for the fighting forces or goods essential to the continued health and strength of civilians.

The urgency of attaining maximum wartime production and the increasing seriousness of strikes led to the introduction into Congress of several anti-strike bills, but this proposed legislation was rejected, for a

time, in the hope of finding voluntary means for settling industrial disputes and thus preventing interference with production. In March, 1941, President Roosevelt established the Defense Mediation Board, whose task was to hold hearings on industrial conflicts that failed to yield to employer-employee negotiations of the usual type. The Board functioned with moderate success, but its usefulness ended with the so-called Captive Mine Case in which, by a nine-to-two vote, the Board rejected the demand of the United Mine Workers of America for a closed shop. The C.I.O. members of the Board promptly resigned, and a strike was called. John L. Lewis, president of the union, finally agreed to arbitrate the dispute, but only after three requests had been made by President Roosevelt and with full knowledge that the third member of this board of arbitration would be a man who favored the union demand. The Board promptly voted to grant the union the closed shop.

The attack upon Pearl Harbor and the immediate declaration of war by the United States brought the strike problem to a head and emphasized the necessity of finding a solution. On December 17, 1941, President Roosevelt called a conference of representatives of labor and industry, at which it was agreed that for the duration of the war there would be no strikes or lockouts, that all labor disputes would be settled by peaceful means, and that a National War Labor Board should be established for the peaceful adjustment of such disputes. President Roosevelt created this Board by Executive Order on January 12, 1942, "for the purpose of adjusting and settling labor disputes which might interrupt work which contributes to the effective prosecution of the war." The National War Labor Board consisted of four public members, four employer members, and four labor members (two representing the A.F. of L. and two the C.I.O.). Regional War Labor Boards were set up, and disputes between employers and workers were heard by tripartite panels consisting of one representative each from industry, labor, and the public. Recommendations by these panels were made to the Regional Boards, which then rendered decisions that became effective except in cases in which appeals were taken to the National War Labor Board. There can be no question that the work of the War Labor Board did much to reduce friction in the field of labor disputes, and thus aided in keeping production at a high level of efficiency.

Anti-Strike Legislation. The National War Labor Board had an advantage over the Defense Mediation Board in starting out with a definite agreement by labor and industry to outlaw strikes and lockouts temporarily. Though this agreement did not wholly prevent strikes, as we have seen in Table 25, the number and seriousness of work stoppages were materially reduced. However, the fact that there were some actual strikes and threats of others in important fields of production (notably in the mining of coal) led Congress to pass, on June 25, 1943, over the President's veto, the Smith-Connally Act, which was known also as the War Labor Disputes

Act. This Act related to establishments "which may be required for the war effort or which may be useful in connection therewith." It authorized government seizure of private plants in which production had been interrupted by strikes, and provided (1) for maintaining the same working conditions as prevailed prior to governmental possession, and (2) for penalties against persons instigating or aiding any strike, slow-down, or interruption in plants taken over by the government. It also required that thirty days' notice of a labor dispute must be given, and that after the expiration of this waiting period a secret strike ballot should be conducted by the National Labor Relations Board for the purpose of determining whether a majority of the workers favored going on strike.

This anti-strike bill was, from the time of its enactment, severely criticized by labor, by impartial students of labor problems, and by a good many business men, as being unlikely to improve the situation. It was regarded by many observers as being incapable of effective enforcement, and was charged with encouraging rather than discouraging strike sentiment among groups of workers who might be seeking relief from what, rightly or wrongly, they regarded as more than their fair share of the economic burdens of the war. It was, said *The New York Times* editorially, "one of the stupidest pieces of legislation ever passed by Congress."²² The Smith-Connally Act expired on June 30, 1947.

The end of fighting in World War II, as in World War I, brought a great increase in the number and seriousness of industrial strikes in this country. In the last full year of the war, 1944, less than one-tenth of one per cent of the "total available working time" was lost through strikes. In 1945, the loss was four times as great. Once the task became one of reconversion rather than maximum war production, organized labor proceeded to take measures to safeguard the wage gains that had been made during the war. Demands for increases in wage *rates* were made, with the general objective that the "take-home pay" for a 48-hour week (which included eight hours at overtime rates) should continue to be paid for the "normal" 40-hour week. Strike after strike was declared, and in general settled by granting wage increases, though usually the increases were not much larger than one-half of the amount demanded. Congress, anxious to have the country converted speedily to peacetime industry, threatened the strikers with a new anti-strike law (the Case Bill), which rejected President Truman's proposal to establish a fact-finding commission to investigate the merits of a given union demand, and called for the prohibition of mass picketing, and the revision or nullification of the Norris-LaGuardia Anti-Injunction Act and the National Labor Relations Act. The Case Bill was vetoed by the President.

American experience seems to indicate that there is little reason to suppose that anti-strike legislation is the remedy for industrial disputes, or that it can actually be enforced. Indeed, there seems to be a growing

²² *The New York Times*, February 28, 1945.

feeling among labor experts that industrial conflicts must in general be settled by collective bargaining rather than through legislation or governmental intervention. One of our well-known economists, Professor Slichter of Harvard, goes so far as to suggest that "an occasional strike or lockout is needed both to test the willingness of each side to fight and to keep alive a vigorous spirit of realism."²³

PROSPECTS FOR INDUSTRIAL PEACE

In our discussion of employer attitudes toward unionism, we noted that not all American business men are opposed to collective bargaining. There are many, indeed, who would far rather deal with a strong union than with the workers individually; and there are certain socially-minded employers who for years have been earnestly seeking a remedy for industrial conflict. Though conflict seems to be inherent in our type of economic system, means have been found for alleviating the situation to some extent.

Mediation and Arbitration. It is possible, at times, to avoid open breaks between employers and employees through the use of mediation or arbitration. Mediation (or conciliation) is a device for smoothing out the process of collective bargaining. The mediator is a disinterested third party who meets with the disputants and attempts to bring them to satisfactory terms. He isolates the main issues from the non-essentials, and by creating an atmosphere of friendliness and confidence aids the contending parties to reach an agreement, though he does not himself render a decision. Mediation, then, consists of talking over differences in the presence of a neutral party (sometimes called an "impartial chairman") who, by means of tactful questions and suggestions, but not by argument, eases the situation and in many cases gets both parties to make concessions so that a peaceful settlement can be reached.

In its Conciliation Service, the United States Department of Labor has several scores of "commissioners" whose services are available when both sides to an industrial dispute request their assistance in ironing out differences. According to the President's Annual Message to Congress on January 21, 1946, the Conciliation Service had handled, in the preceding five months, "over 3000 disputes affecting over 1,300,000 workers, without a strike threat" and had "assisted in settling about 1300 disputes where strikes were threatened which involved 500,000. . . . Many of these adjustments occurred in key industries and would have seemed to us major crises if they had not been settled peaceably." The successful functioning of this agency suggests the desirability of enlarging this Service so that its good offices may be made available on a larger scale in the future.

When arbitration is resorted to, it is assumed that a decision will be

²³ Quoted in *Information Service*, New York, Federal Council of the Churches of Christ in America, January 19, 1946.

rendered by the arbitrator (or board of arbitrators). A hearing is held, at which the parties to the dispute have a chance to present their cases, and on the basis of the evidence presented the arbitrator, or arbitration board, makes what is presumably a thoroughly impartial judgment. In many instances, the disputants agree beforehand to accept whatever decision is rendered, but in some cases it is agreed that the parties concerned shall be free to accept or reject the award.

Mediation and arbitration are valuable in providing a period of calm deliberation before a strike or lockout is declared. However, the agreement reached is more likely to reflect the bargaining power of the two parties than to be based on any principles of "fairness" or "justice." An arbitrator, trying to please both contestants, usually comes to a decision that represents a compromise, giving to each party somewhat less in the way of advantage than has been asked for. Thus a truce is patched up and weapons are laid aside temporarily, but the conflict is fairly certain to be resumed whenever a shift in bargaining strength gives promise to one or other of the parties that gains may be realized through a display or exercise of power. Despite the temporary nature of most settlements, mediation and arbitration serve a useful purpose in reducing the number of disputes that reach the strike stage—often by enabling both sides to save face when they have taken definite stands and are too stubborn to back down. They are less costly than recourse to militant measures, and are therefore preferable to the strike as means of effecting the economic readjustments that must be made from time to time.

The Right to Strike. In the fall of 1946, John L. Lewis, president of the United Mine Workers, announced his inability to negotiate a new contract with the federal government, which had taken over the mines under wartime legislation that was still in force. On the basis of the miners' traditional "no contract, no work" policy, the mining of coal was stopped for a period of several weeks. This defiance of governmental authority, which threatened to interfere seriously with industrial production by reason of a coal shortage, was denounced not only by the foes of organized labor but by many labor sympathizers as well. Certain legislators interpreted the November, 1946, election of Republican majorities to both House and Senate as a "mandate" to Congress to "put labor in its place," and promptly announced that they would introduce bills abolishing the strike and the closed shop, and greatly modifying or repealing the Norris-La Guardia Anti-Injunction Act and the National Labor Relations Act. Congressional views of the kind of labor legislation that was needed will be noted in our summary of the provisions of the Taft-Hartley Act, which became law in June, 1947.

The strike, as we have noted, often brings inconvenience and hardship to employers, employees, and the public. Like military warfare, it does not decide the right or wrong of an issue, but merely determines which

side, for the moment, is the stronger. Hence the strike, like the lockout, is socially objectionable. Nevertheless, "a strike may be less harmful to the state and to industry than peace maintained either by statutory tyranny, legal usurpation, or overwhelming economic domination."²⁴ To outlaw the strike would weaken the workers' bargaining power greatly, since, in the last analysis, this power rests upon the ability to damage the employer's business interests by waging a strike.²⁵ Moreover, there is grave doubt whether a law abolishing the right to strike could actually be enforced.

The prohibition of strikes might be justified in the so-called "essential industries" which must be operated continuously if the public welfare is to be preserved. However, it would seem necessary to provide for the compulsory arbitration of labor disputes in such industries, or to take these businesses out of the field of private enterprise and to serve notice that in these particular industries strikes will not be tolerated. So long as an industry is in the hands of private enterprisers, being operated for the profit of its owners, it would obviously be unfair to hamper labor in its profit-seeking activities by abolishing the right to strike. A further problem to be solved would be that of determining which industries were to be regarded as essential. Probably most persons would agree that the mining of coal and the operation of communication and transportation lines are vital to the welfare of the public. But may not the production and distribution of milk, bread, and other forms of foodstuff be equally essential? Indeed, a move to abolish industrial strikes on the basis outlined above might easily lead to the public ownership of many types of industry; and this, in many instances, would probably be distasteful to both enterprisers and workers.

Peace Through Conference. Employee representation, as we have already noted, has for its outstanding feature a system of frequent conferences between chosen representatives of the employer and his employees. It "aims to provide government by consent of the governed. It is built upon the assumption that free discussion between management and workers will bring about a better understanding of the problems to be solved, create a spirit of genuine cooperation, call forth helpful suggestions from intelligent workers, and permit the settlement of differences by negotiation instead of combat."²⁶ There are few who would challenge the assertion that industrial peace can be promoted through friendly conferences which keep the employer and employee informed of each

²⁴ Solomon Blum, *Labor Economics*, New York, Henry Holt & Company, Inc., 1925, p. 268.

²⁵ In printed pamphlets and full-page newspaper advertisements, the National Association of Manufacturers in 1946 presented "a national labor policy to minimize industrial strikes," which included the prohibition of strikes, lockouts, and boycotts. Organized labor, however, manifested no inclination to surrender the right to strike, its most powerful bargaining weapon.

²⁶ Paul F. Gemmill, *Present-Day Labor Relations*, p. 58.

other's problems and aspirations. There are many who question that the conference plan can be wholly successful in this respect, so long as it is based upon the company union, which so many workers regard with suspicion.

But this particular handicap to employer-employee conferences can be avoided through the adoption of what is popularly known as "union-management cooperation."²⁷ Under this plan of organization the workers belong to independent unions, not company unions, and consequently have behind them the power of collective bargaining that goes with effective unionization. Thus, they are not dependent upon the benevolence of the employer, but are able to fight their own battles in the writing and enforcement of a trade agreement. But union-management cooperation provides also for frequent meetings between the representatives of management and workers *in a given plant*, and these meetings have proved extremely helpful in the solution of local problems. The signal success which has attended the operation of union-management cooperation in the case of the Baltimore and Ohio Railroad has led to its installation in other establishments in this country and Canada.

The Labor-Management Relations (Taft-Hartley) Act of 1947. Since the avowed purpose of this Act is to reduce industrial strife, it seems appropriate to examine this latest piece of labor legislation in the section of our discussion that deals with prospects for industrial peace. Following are some of the provisions included in this long and complicated Act:

1. After August 23, 1947, no new closed-shop contracts may be made, though existing contracts may run to the date of expiration.
2. The union shop (or closed shop with an open union) is lawful only if a majority of the workers in an establishment have voted for it.
3. The government may ask the courts for 80-day injunctions against strikes that affect the national safety, such as a nation-wide strike in coal mining. If conciliation fails to bring about a settlement during this 80-day period, the President is required to refer the matter to Congress.
4. Jurisdictional strikes (those called for the purpose of forcing an employer to help one union against another in a jurisdictional dispute) and secondary boycotts (boycotts designed to compel one company not to deal with another company) are prohibited in businesses which enter into interstate commerce. Persons suffering from such illegal tactics may sue the union for damages.
5. Unions *as such* (and corporations, as well) are forbidden to make political contributions and expenditures.
6. Union-controlled health and welfare funds established since January 1, 1946, are forbidden. Existing funds of these kinds may run until their dates of expiration, but not beyond July 1, 1948.
7. Unions are liable to suit for violations of contract.
8. Workers must vote by secret ballot on whether to accept the employer's final offer, before a strike may be called.

²⁷ *Ibid.*, chap. 9.

9. An employer may discuss labor policies with his workers, and may demand an election if he thinks the union no longer represents a majority of his employees.
10. Unions may not charge dues or initiation fees deemed by the National Labor Relations Board to be excessive or discriminatory.
11. The National Labor Relations Board may not certify any union as a collective bargaining agent unless it has affidavits from the union officers stating that they are not communists.
12. The National Labor Relations Board has been enlarged to include five instead of three members, and is to have a general counsel who will prosecute unfair labor practices.

This Act was vetoed by President Truman, but promptly passed over his veto. The President pronounced it a bill "deliberately designed to weaken labor unions." He said it "would even take away from our working men some bargaining rights which they enjoyed before the Wagner Act was passed twelve years ago; . . . would again expose workers to the abuses of labor injunctions; . . . would increase industrial strife because a number of its provisions deprive workers of legal protection of fundamental rights, [and] they would then have no means of protecting these rights except by striking; . . . would open up opportunities for endless law suits by employers against unions and by unions against employers; [and] would threaten fundamental democratic freedoms."

Senator Robert A. Taft, sponsor and chief champion of the bill, said, in reply to the President, that the purpose of the Act was "to restore equality in collective bargaining, and correct only those abuses against employers, union members, and third parties which were clearly shown to exist by bona fide evidence." "The campaign carried on against the bill by the labor unions," he continued, "has been a complete tissue of falsification to support their contention of the last ten years that the unions are above criticism and above the law, that there must be no legislation on the pain of political execution. It is discouraging to find the President of the United States yielding to their pressure, adopting their arguments and blocking the efforts of the great majority of the people's representatives, including a large majority of the Democrats in the House of Representatives, to secure reasonable reform."

We cannot undertake here to appraise the provisions of this Act, one by one. It unquestionably has some good features. Few unprejudiced persons would, for example, defend jurisdictional strikes, secondary boycotts, and excessively high dues and initiation fees, or deny that unions should be required to live up to their contractual obligations. On the other hand, the passage of the Taft-Hartley Act does not in any way weaken our conviction, based upon reasoning which we have already set forth, that the closed shop with the open union—that is, the union shop—is a prerequisite to effectual collective bargaining; and in this view we

are in complete agreement with a host of employers who have been parties to the many thousands of closed-shop contracts that have worked successfully.

We feel, too, that the prohibition of political contributions and expenditures by unions may endanger our democratic procedure by reason of its probable deterrent effect upon freedom of expression through radio and press. It may prevent the workers' position on political candidates and issues from becoming known, because individual unionists are unable to finance expensive publicity and the unions *as such* are forbidden to do so; whereas a contribution or expenditure made by a wealthy individual stockholder of a corporation could readily take care of the cost of newspaper advertising or radio broadcasting that was favorable to the corporation.

Again, the majority vote of employees that is required in order to legalize the union shop is less fair than it seems to be, for it must be a majority of *all entitled to vote* and not merely of those actually voting. If, then, in a plant employing five hundred workers, only three hundred decided to vote, it would require two hundred and fifty-one votes (or approximately 83 per cent of the votes cast) to provide the "majority" prescribed by the Act. The inclusion of provisions such as these have given rise to doubt, on the part of both friends and foes of the Act, as to whether it will prove to be workable.

As was to be expected, organized labor has taken up arms against the Taft-Hartley Act and has announced its intention to fight the battle on all fronts—legal, economic, and political. It is unlikely that the success or failure of the Act will be determined conclusively for several years. Whatever the eventual outcome may be, there is general agreement that for many months to come the prospects for industrial peace in the United States are anything but bright.²⁸

Conclusion. In a society which endorses free enterprise and competition, and measures success by the individual's ability to acquire material wealth, it is difficult to see how industrial conflict can be eliminated, since every incentive is in the direction of getting for oneself all that one can. "It is an indisputable fact," wrote the late Ramsay MacDonald, "that the wage earner and the wage payer have interests which are antagonistic, and in the nature of things cannot be reconciled."

It appears that the most that can be done, under existing conditions, is to make the best of a bad situation. If industrial conflict cannot be avoided in a competitive economic order, we can at least provide "an open field and a fair fight," and seek, at the same time, to safeguard the

²⁸ "The battalions of labor are being deployed for the 'battle of the century.' Employers, flushed with victory for their point of view, are just as stubbornly determined to abandon none of their newly won 'rights.' The premature coal shutdown and the shipyard strikes are merely skirmishes in the long battles that lie ahead." (Louis Stark, in *The New York Times*, June 29, 1947.)

interests of the public. There can be no "fair fight" without the development of a unionism strong enough to win the respect of employers and to enforce collective bargaining. The absence of such a degree of strength would mean economic serfdom. To maintain a strong bargaining position involves adherence to the principle of the closed *shop*, but the closed *union* should be opposed because of its monopolistic nature. Mediation and arbitration are preferable to the strike, even though they may end in compromise and in decisions which hold good only until a new agreement is drawn up. But it seems reasonable that the strike should be forbidden only in those industries that are sufficiently essential to the public welfare to justify their socialization or to insist upon the settlement of disputes through compulsory arbitration.

It is entirely possible that there would be no problem of industrial conflict in a socialist or communist state. But to most Americans a cure of this kind would doubtless appear to be worse than the disease itself.

1. It is held by some that the interests of employer and employee are identical, and by others that these interests are antagonistic. What is the truth in the matter?
2. Speaking not as an employer or employee but as a member of society, state your reasons for favoring or opposing collective bargaining.
3. Compare the number of American workers under "employee representation" with the number belonging to unions which are independent of employer control.
4. What are the relative merits of "craft" and "industrial" unionism under present-day economic conditions?
5. Compare or contrast the American Federation of Labor and the Congress of Industrial Organizations.
6. Employers' associations are sometimes said to parallel the national unions. Explain why you think the suggestion of parallelism is or is not sound.
7. Why do labor organizations regard "recognition of the union" as vitally important to their interests?
8. Unionists insist upon applying the principle of "standardization" to wages, hours, and working conditions, in drawing up their trade agreements. Why do they regard this principle as important?
9. What are the purposes and methods of sabotage?
10. In what respect does the closed union resemble the industrial monopoly?
11. "It is the open union operating under the closed-shop principle that most students of labor regard as the best form of labor organization yet devised." In what respects is this combination superior to (a) the open union and the open shop, and (b) the closed union and the closed shop?
12. Explain the way in which a successful union tends to get for its members the favorable wages, hours, and working conditions which "would tend to come to these workers *in the long run and under competitive conditions* even in the absence of a union organization."

13. Discuss the methods of limiting output which are sometimes practiced by organized workers.
14. Cite instances in which enterprisers also are guilty of restricting production.
15. The strike and the lockout are said to be "similar in purpose, in method, and in social consequences." Examine this statement critically.
16. On what basis has the closed shop been attacked by those who have conducted the "open-shop movement"?
17. Describe the essential features of the company union.
18. Why are unionists so violently opposed to "yellow-dog" contracts and to the use of judicial injunctions in labor disputes? What threat do such contracts and injunctions hold for independent unions?
19. Discuss the purpose of the National Labor Relations Act, and the functions of the National Labor Relations Board.
20. State the main provisions of the Fair Labor Standards Act, and the need for such legislation.
21. Discuss the attitude of workers and employers toward the question of high wages and large profits, respectively, in time of war.
22. During World War II we set up special agencies to handle disputes between employers and workers. Explain the need for such agencies.
23. How was the problem of strikes dealt with in World War II?
24. Discuss the need for, and usefulness of, the National War Labor Board.
25. What are the probabilities of securing industrial peace, and desirable employer-employee relations, through anti-strike legislation?
26. Distinguish between mediation and arbitration.
27. If industrial strikes were outlawed, the public would be spared a great deal of inconvenience and even hardship. Why, then, should we hesitate to prohibit the use of the strike?
28. The unionists who are antagonistic to "employee representation" are usually kindly disposed toward "union-management cooperation." Why?
29. "The class conflict between an owning and a working group is not only a logical thing to expect but a fact which has unquestionably been found in history," says Norman Thomas. Is there, then, any solution of the problem of industrial conflict?

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Economic Insecurity: Unemployment

ONE OF THE DISTINCTIVE FEATURES OF MODERN ECONOMIC LIFE IS THE separation of the worker from ownership of the tools with which he performs his daily task. Business is owned and controlled by corporations, partnerships, and individual proprietors. Economic society is made up largely of employers and employees—those who provide jobs and those who fill them.

THE WORKER AND HIS JOB

The importance of a job to the industrial worker can scarcely be exaggerated. "Any one who has associated with those dependent upon daily toil for their living knows the positive terror in which thousands of men live as they think of the possible loss of their opportunities to work,"¹ says one writer. Mr. Whiting Williams, who, in his studies of the workingman, has donned overalls and worked side by side with laborers in many industries, believes that "this insecurity of the job causes more antipathy to the whole industrial, social, economic, moral, and political structure than all other things put together." And Mr. Herbert Hoover, long before he became President, stated that "no waste is greater than unemployment, no suffering is keener or more fraught with despair than that due to inability to get jobs by those who wish to work."

The Significance of a Job. This emphasis upon the importance of an opportunity to work is fully justified by the situation. Among the minimum requirements of human beings are food, clothing, and shelter. Only in very primitive communities are all of these commodities made directly by those who consume them. What happens nowadays is that workers engage in highly specialized occupations, and in return for their contribution to production they receive purchasing power, usually in the form of money wages, with which they buy the commodities and services that they want most. But the dangers of the system are apparent. For human needs and human wants continue as long as life itself, but the ability of the worker to satisfy these needs and wants depends upon having

¹ Francis J. McConnell, in Kirby Page, editor, *A New Economic Order*, New York, Harcourt, Brace & Company, Inc., 1930, p. 348.

a job. Hence, the loss of a job may spell tragedy. No job, no wage; no wage, no purchasing power; no purchasing power, no economic goods, is the inexorable sequence of negatives that causes workers to dread the day of unemployment.

The misery is multiplied, of course, when the loss of work falls upon the man who has a wife and children to support. Even a short period of unemployment frequently means a lowering of standards of living, and often to terribly low levels. Whatever savings may have been laid aside have to be managed with great economy. Reductions in expenditures are made all along the line. The food supply declines in both quantity and quality. The two or three quarts of milk are reduced to one, and such luxuries as fruits and fresh vegetables disappear from the menu. Often the parents deny themselves food they need badly, so that the children may not suffer from hunger. In the consumption of clothing and shelter, also, sacrifices are necessary. The children may have to go to school insufficiently clad, even to the extent of wearing soleless shoes in cold weather. Probably the family moves to smaller and cheaper living quarters in a less desirable part of town. Fuel, too costly to be wasted in heating the rooms, is in some instances used only for cooking the meager meals. These are only a few details of conditions following close upon the heels of unemployment, as reported by hundreds of social workers. Notwithstanding these economies, it usually takes many months for workers to get out of debt after business picks up again, and in some instances these obligations are never met. Studies of the effects of unemployment upon family life make gloomy reading.²

Unemployment: A Phase of Economic Insecurity. Unemployment is commonly defined as *involuntary idleness on the part of workers who are able and willing to engage in productive activities if given the chance to do so*. Since, despite their desire for work and their attempts to find jobs, these would-be workers are unable to secure employment, their incomes are cut off, and they and their dependents suffer from the lack of commodities and services essential to their well-being. In our highly complicated economic society, the worker's ability to secure an income depends not only upon his skill and willingness to accept employment, but upon any of a host of conditions over which he as an individual has little or no control. He may be so lucky as to have steady work year in and year out, or, on the other hand, he may find himself dispossessed of his job and a victim of temporary or permanent unemployment. The economic maladjustments that result in enforced idleness, and consequent loss of income, constitute the problem of unemployment, which, in turn, is the most serious phase of the broader problem of economic insecurity.

² True accounts of poverty resulting from unemployment that occurs even in the most prosperous of American "good times" may be found in Clinch Calkins, *Some Folks Won't Work*, New York, Harcourt, Brace & Company, Inc., 1930.

THE NATURE AND EXTENT OF UNEMPLOYMENT

The average man who is hunting work probably does not know that there are several kinds of unemployment, and would not be interested in the fact if it were brought to his attention. To him the all-important question is how to find employment so that he may again enjoy an income. But to the student of labor problems, searching for a remedy for unemployment, an understanding of the types of unemployment and their causes is of first importance. We shall examine, in turn, "cyclical," "seasonal," and "technological" unemployment.

Cyclical Unemployment

The Business Cycle and Unemployment. The term "cyclical unemployment" is derived from the business cycle, with which unemployment of this type is associated. The words "business cycle" are simply a convenient expression for designating the wavelike fluctuations in business activity which most writers on economics describe as consisting of four phases—*prosperity*, *crisis*, *depression*, and *recovery*—and which are dealt with at some length in Chapter 37. Employment is plentiful in times of prosperity, it declines with the appearance of a crisis, it is scarce during the depression, but increases in volume with the recovery of business. The particularly serious stage of cyclical unemployment, then, is the period of business depression. A survey of business conditions in the past reveals the fact that many of these periods of depression, which are commonly referred to as "hard times," have been experienced by all of the highly industrialized countries, for the business depression is no respecter of nations—it smites industry throughout the world, though some countries fare less badly than others.³ Since the period of depression is a time of very limited production, business concerns reduce their operations or shut down their plants completely, many workers are laid off or forced to go on part time, and privation and suffering follow as a matter of course.

The Post-1929 Depression. The seriousness of the problem of cyclical unemployment in the United States cannot be stated in any very satisfactory terms. There have been some attempts to gather together figures showing the number of persons out of work, but the machinery available for the collection of data is woefully inadequate. No government census of unemployment was taken in this country between 1910 and 1930. The census of 1930 was the outcome of a popular demand for unemployment statistics for the period of business depression that followed the stock market crash of 1929. This census showed, according to the Secretary of Commerce, that there were 6,050,000 jobless workers in the United States

³ It may be noted that Soviet Russia claims to have vanquished business depressions and unemployment, which, according to the spokesmen for that socialist state, are inherent defects of capitalism. This point is touched upon in chap. 50 (vol. 2).

by January, 1931, and that an additional 250,000 to 300,000 workers were idle "because of lay-off from their regular jobs at the time of the special census."⁴

In Table 26 are given figures on unemployment in the United States for the years 1929-45, inclusive. They indicate that even in the early years of the post-1929 depression as many as 3 to 7 million workers were unemployed, and that the number of involuntarily idle reached 14½ millions when the depression was at its worst in January, 1933. The table shows that, once the peak was passed, the volume of unemployment was smallest in September, 1937, but again became very serious in 1938 and remained serious until the demand for war supplies turned a labor surplus into a manpower shortage. It must be remembered that these figures are estimates and may not be wholly accurate, but they give some notion of

TABLE 26. ESTIMATED VOLUME OF UNEMPLOYMENT
IN THE UNITED STATES, 1929-45

(Average monthly number unemployed)

Year	Unemployed Workers	Year	Unemployed Workers
1929	429,000	1937 (<i>September</i>)	4,479,000
1930	2,896,000	1938	9,796,000
1931	7,037,000	1939	8,786,000
1932	11,385,000	1940	7,607,000
1933	11,842,000	1941	3,276,000
1933 (<i>January</i>)	14,514,000	1942	-617,000 ⁵
1934	9,761,000	1943	-6,360,000 ⁵
1935	9,092,000	1944	-6,894,000 ⁵
1936	7,386,000	1945	-4,909,000 ⁵
1937	6,403,000		

the extent to which incomes, and consequently standards of living, may be affected by interference with business operations.

Unemployment in "Good" and "Normal" Years. In the early days of the depression, the Director of the Census estimated that we had in the United States between 47 million and 49 million "gainful workers." This did not mean that that number actually had jobs, but that these men, women, and children were able and willing to work, and therefore were members of the labor force of the country. If we place the number at

⁴ *American Labor Year Book, 1931*, New York, Rand School Press, 1931, p. 31.

⁵ *The Economic Almanac, 1946-47*, New York, National Industrial Conference Board, 1946, pp. 268, 269, "Negative unemployment (as indicated for 1942, 1943, 1944, and 1945) arises during periods of high industrial activity when there are persons at work who are not ordinarily counted as members of the labor force." It will be clear that there may be some *unemployment* in a period of *negative unemployment*, as is demonstrated by the Social Security Board's statement that about a million persons were unemployed in June, 1944. It should be noted that the Conference Board's estimates of unemployment were lower than those of some organizations.

48 million, and accept the *average* monthly figure of 12 million unemployed in 1933, it is evident that about one-fourth of the nation's workers were deprived of the means of livelihood in that year.

However, the raids on income made by unemployment are not confined to years of depression. To be sure, they are most spectacular in such periods; but in times of "prosperity," also, there is a surprisingly large amount of involuntary idleness. It seems that unemployment, like the poor, we have always with us. Indeed, there is doubtless a causal relationship here, for certainly some, though by no means all, of our poverty is directly chargeable to the persistence of unemployment. The Social Security Board states that "in the years 1922-29, often cited as an example of prosperity in the United States, there was average unemployment of about 8 per cent [and] even under the abnormal pressure of all-out war, about a million persons were unemployed in June, 1944."⁶

The Severity of Cyclical Unemployment. Business depressions vary in their intensity, and it is customary to distinguish between "major" and "minor" depressions. Since the turn of the century we have had, in the United States, four major and three minor depressions, the major depressions falling in 1907-08, 1914-15, 1920-21, and 1929-38, and those of lesser importance in 1911, 1924, and 1927. Naturally, the greater the intensity of the depression, the larger the resultant army of unemployed. Professor Douglas has made some interesting estimates of unemployment in manufacturing, transportation, the building trades, and mining, which show that in these industries 16 per cent of the workers were unemployed in 1908, 9 per cent in 1911, 16.4 per cent in 1914, 23.1 per cent in 1921, and 12 per cent in 1924.⁷ The greater severity of unemployment in the major depression years of 1908, 1914, and 1921 is evident. Not only is unemployment more serious in some years than others, but workers in certain occupations are particularly liable to be released from their jobs in time of depression. For example, Professor Douglas found that in one depression, 32.2 per cent of the workers in coal mining and 34.6 per cent in the building trades were deprived of their jobs, whereas in manufacturing and transportation the percentage was only 12.9.

The extent of cyclical unemployment in our great industrial centers may be illustrated by the case of Philadelphia. A study conducted by the Works Progress Administration showed that in 1933, the worst year of the post-1929 depression, only 34.1 per cent of Philadelphia's "employable persons" had full-time work, 19.9 per cent were on part time, and 46 per cent were wholly unemployed. Comparable figures for 1937 (with its greatly improved business conditions) were 70.5, 5.0, and 24.5 per cent, respectively, for the three categories of employment status given above.

⁶9th Annual Report, 1944, of the Social Security Board, Washington, Government Printing Office, 1944, p. 6.

⁷Paul H. Douglas and Aaron Director, *The Problem of Unemployment*, New York, The Macmillan Company, 1931, p. 32. Professor Douglas does not give the data for 1927 or for the post-1929 depression.

The seriousness of cyclical unemployment lies not only in the number of workers thrown out of employment, but also in the length of time they are compelled to go without work. Periods of depression last from a few months, in the case of minor disturbances, to as long as several years when the business disruptions are of greater proportions. The National Bureau of Economic Research estimates that the "downward swing" of the business cycle (including crisis and depression, both of which bring unemployment) has an *average* duration of some sixteen or seventeen months. Since the downward swing is often much shorter than this, it must of necessity be considerably longer at times. The point is important in connection with unemployment only in its implication that unfortunate workers may, through cyclical unemployment, be out of work not only for months but even for several years. Indeed, the post-1929 depression brought enforced idleness to some workers for as long a period as five or six years.

Short and Long Depressions. Perhaps a deep depression of short duration would cause less harm to workingmen and their families than a long-drawn-out period with a smaller percentage of workers unemployed. The former would throw many out of work for a short time, but the latter, through long-continued idleness for a smaller number, virtually overwhelms with misery those whom fate has chosen as victims. But industrial workers, like beggars, cannot be choosers. In their impotence to influence the business cycle they must take business depressions as they come. And it so happens that the depressions that cut deep, severing men by the millions from their jobs, are also those that seem to stretch out interminably, leaving behind them malnutrition, sickness, and discouragement for those least able to bear these ills, and a consequent resentment toward the existing economic and political order.

Seasonal Unemployment

It is cyclical unemployment, with its millions pleading for jobs, with soup kitchens and bread lines and frantic appeals for relief funds, that most persons think of when the word "unemployment" is mentioned. But seasonal unemployment, though it commands less attention in the public press and is the subject of fewer discussions in the conventions of learned societies, is probably responsible for at least as much involuntary idleness as cyclical unemployment. The reason is that seasonal unemployment adds to its tally year in and year out, and not only in periods of business depression.

Production and Unemployment. Steady employment is dependent, of course, upon the continuous operation of business establishments. If production is interfered with, even for a short period, some employees are laid off or put on part time. Since seasonal unemployment goes hand in hand with declines in production, an examination of seasonal fluctuations in production gives a clue to the state of employment. If steady em-

ployment is closely related to continuous production, then any wide variations in production that take place in a period so short as to exclude an appreciable change in the quantity of labor available are strongly suggestive of seasonal unemployment. For if the number of workers in an industry is sufficiently large to run the industry when production is at its height, it would seem to follow that some of these employees must be jobless whenever production falls off—unless, as is most unlikely, they can readily find temporary jobs in other branches of industry.

Examples of Seasonal Industries. Among the industries that are notoriously seasonal in nature are the clothing and building trades and the mining of bituminous coal. "As Impartial Chairman in the Men's Clothing Industry in the City of New York during the past eight years," wrote Dr. Jacob Billikopf some years ago, "I have found that the men and women in the clothing industry, especially in the metropolis, have not averaged more than thirty-two weeks' employment in any year in the past decade, with the exception of the cutters, who constitute the most skilled element in the industry. The situation has been even more acute in the ladies' garment industry, about 80 per cent of which is located in and around New York City. In 1927, a highly prosperous year [in the clothing business, though one of mild depression for industry in general], the International Ladies' Garment Workers of America conducted a strike which lasted several months. One of the essential demands of the workers was a guarantee of thirty or thirty-two weeks' employment a year, which was denied." About 500,000 workers are engaged in making men's and women's clothing in this country. The manufacture of women's clothing is especially seasonal, with peaks in March and October, and valleys in January and July. Ordinarily, about three-fourths as many workers are busy in July as in March and October in the women's clothing industry.⁸

Employment conditions in building construction and bituminous coal mining also are often very bad. A committee on seasonal operation in the construction industries, appointed by Mr. Hoover when he was Secretary of Commerce, reported that it is "the general rule that the building trades are occupied wholly for only three to five months in the year." Other investigations have shown that in many branches of the building trades the workers are employed only about 80 per cent of the year. The situation is particularly serious because there are about two million workers in the building trades who, as the result of the seasonal nature of the industry, find 50 per cent less employment in the poorest winter month than during the height of building activity in the summer. The production of bituminous coal is largest in November and smallest in April, with the output in the minimum month about three-fourths as

⁸ W. S. Woytinsky, *Seasonal Variations in Employment in the United States*, Washington, Social Science Research Council, 1939, p. 49. This book presents much specific information on seasonal unemployment.

great as that of the maximum. "From 1890 to 1932 the bituminous coal mines were open for operation an average of 205 days in a year; and the maximum year's employment in this four decades was 249 days in 1918, during the World War."⁹

Are All Industries Seasonal? We have cited several industries in which the seasonal fluctuations are very large. Though these are not typical examples, they are of particular significance because of the extent of the variations in production and the large number of workers affected in the months of slight business activity. But there is reason to believe that, on a smaller scale, practically all industries are seasonal. "It would be most difficult to find an industry which showed an even distribution of production and employment throughout the year," says Dr. Isador Lubin, an expert on labor problems. "An individual plant here and there, to be sure, may show steady and regular employment from month to month, but such plants are exceptions and by no means the rule in any industry. Some industries, like some plants, show less fluctuation in employment than others, but none are free from seasonal ups and downs."

Data compiled by the Research Division of the Federal Reserve System indicate that in the field of *manufacturing as a whole*, from 1919 to 1937, inclusive, there was a peak of activity in mid-September in which 3½ per cent more workers were employed than at the low point of activity in mid-January.¹⁰ Professor Douglas figures that seasonal fluctuations in manufacturing, transportation, the building trades, and mining cause on the average about 6 per cent of the workers in these industries to be unemployed. If other occupations (such as public utilities, merchandising, domestic and professional service, and government employment) were included, the estimate would have to come down somewhat, dropping perhaps as low as to 5 per cent. It is probably not far from correct, then, to say that on the average one-twentieth of our American workers are always out of work by reason of seasonal unemployment.

Technological Unemployment

The Problem of Permanent Layoffs. A third type of enforced idleness, to which Professor Sumner H. Slichter gave the name "technological unemployment," has been receiving a great deal of attention in recent years. The term is not wholly satisfactory, because, as Professor Slichter himself points out, it suggests only displacement by mechanical changes in industry, whereas the problem is in reality a much broader one—"the problem of unemployment produced by permanent layoffs."¹¹ A *permanent layoff* does

⁹ Mary L. Fledderus and Mary van Kleeck, *Technology and Livelihood*, New York, Russell Sage Foundation, 1944, p. 55.

¹⁰ W. S. Woytinsky, *Seasonal Variations in Employment in the United States*, p. 50.

¹¹ Sumner H. Slichter, "The Problem of Technological Unemployment," in *Unemployment and Adult Education (A Symposium)*, New York, American Association for Adult Education, Inc., 1931, p. 34.

not necessarily mean *permanent unemployment*, but it does mean that the concern for which a man has worked has no further use for him, at least not in his former capacity. Among the most important causes of permanent layoffs are improved technical processes, the extension of scientific management, industrial mergers, and important changes in demand on the part of the consuming public.

Labor-Saving Machinery. In dealing with employer-employee relations, we referred to labor's tendency to fight the introduction of labor-saving devices, owing to the fear that the new machinery would bring unemployment in the form of permanent layoffs. Despite this opposition, new processes are being brought into industry continually, and it is probable that there have been more revolutionary changes in manufacturing technology during the past quarter-century than in any equal period of time in history. One of these changes was the introduction of the automatic loom into textile manufacture, with the result that one worker can now take care of 24 to 64 looms, as compared with the one to eight looms previously handled. A second innovation was the cigarmaking machine, which manufactures from 3000 to 4000 cigars in an eight-hour day, and threw out of employment over 30,000 skilled cigarmakers, each capable of producing only 300 cigars a day. Yet another technical improvement is the use of the "continuous process" in the manufacture of plate glass, which now turns the glass out in a continuous ribbon instead of in small cylinders which had to be cut and flattened. The new process means a reduction of 40 per cent in the amount of labor required.

These are examples of the mechanical changes that have taken place in scores of manufacturing industries which, according to Federal Reserve data, increased the *output per man* some 45 per cent between 1919 and 1929, and turned loose from their jobs some 500,000 workers, or about 6 per cent of the total number formerly engaged in manufacturing.¹² A similar movement has been going on in agriculture. The use of the most improved farm machinery, such as tractors and combines, brought an increase in agricultural product of 25 per cent *per worker* in this ten-year period. Though we are raising more farm products than ever before, we are doing it with fewer workers. The number of "gainful workers" in agriculture declined by almost two millions from 1910 to 1930, which probably means that these farm laborers, with their families, were forced by technological unemployment to seek their fortunes in the city.

The railroads, though handling more freight now than ever before, have laid off approximately a million workers since 1920. Switchmen and brakemen have been displaced by a mechanism for shifting and

¹² The Research Department of the International Brotherhood of Electrical Workers has compiled a list of forty-six important automatic machines that have done much to eliminate human labor from certain branches of industry. See *Annals of the American Academy of Political and Social Science*, March, 1931, pp. 19, 20.

sorting cars, and 24,000 railway firemen were released through the installation of mechanical firing apparatus. Another great basic industry, coal mining, has also felt the pressure of mechanical progress. Eighty per cent of the bituminous coal produced in the United States is now mined by machinery—a fact which helps to explain why 110,000 miners lost their jobs in a recent decade. The post-1929 depression, with its labor surplus, did not provide much incentive for the introduction of labor-saving machinery, and it is too early to know how the technological advances of World War II will affect peacetime industry; but we may note in passing that the installation of dial systems and the merging of companies reduced the number of telephone operators by 40,000 between 1930 and 1940.

Improved Methods of Management. Some technological changes take place suddenly, rendering useless almost overnight the acquired skill that trained workers have built up over a long period of years. But permanent layoffs may also be produced by "small, non-revolutionary technical changes, by small improvements in management, by the gradual tightening of efficiency."¹³ Scientific management, for example, is ever on the lookout for better methods of procedure, which in some cases make it possible to turn out the same amount, or even a larger amount, of product with fewer workers. Time and motion studies, which are devices of scientific management, tend ordinarily to split jobs into smaller and simpler parts. Some of these smaller operations are distinctly repetitive, and can be entrusted to the speedy, certain performance of machinery. Others are so simple as to require little or no skill on the part of the workers. A case in point is automobile manufacture, in which, according to the late Henry Ford, 43 per cent of the jobs can be learned in one day, and 36 per cent in one day to a week. The adoption of scientific methods may result, then, in the displacement of men by machines, and of highly skilled workers by those who can perform the tasks put to them with almost no training. In these and other ways, scientific management is in part responsible for technological unemployment.

Mergers and Unemployment. Business mergers or consolidations, which were once viewed with suspicion and apprehension in this country, take place so often nowadays that they no longer excite comment.¹⁴ They, too, have helped to raise the total of technological unemployment by laying off employees who, by reason of the new arrangements, have been rendered superfluous. Many writers have called attention to the excessive productive capacity of most of our industries. One-sixth of our 1129 boot and shoe factories, if operated on full time, could produce our present output of

¹³ *Ibid.*, p. 34.

¹⁴ From 1922 to 1928 there were 201 mergers effected, involving 1259 business concerns. See Stuart Chase, "The Iron Bouncer," in *Unemployment and Adult Education (A Symposium)*, p. 14.

footwear. The total output of cement and bituminous coal needed in this country could be produced by three-fifths of our cement mills and one-fourth of our coal mines. In some lines of industry this overexpansion of plant is now in process of being eliminated through consolidations which will close down the less efficient units and thus effect large economies.

This elimination of waste in industry is highly desirable, from the point of view of both enterpriser and society in general, but it does add to the burden of technological unemployment. At the same time, however, it lessens somewhat the amount of seasonal unemployment. Mr. Sam A. Lewisohn says that "unemployment may be due to bad management which creates seasonal unemployment or good management which causes technological unemployment." Excessive productive capacity is wasteful, is the result of bad management, and brings seasonal unemployment. When mergers eliminate this waste they benefit society at large through the exercise of good management, but at the same time often increase the quantity of technological unemployment. Mergers may cause the displacement of factory workers, office employees, salesmen, and other types of labor. It is stated that the merger of the Colgate-Palmolive-Peet Company caused thousands of salesmen and office workers to lose their jobs.

The Effects of Permanent Shifts in Demand. Permanent layoffs are sometimes the result of permanent changes in demand. If the public refuses to buy a commodity, there is obviously no point in making it, and employers engaged in its manufacture are compelled to close down their plants. A striking example is the ship- and boat-building industry, which suffered a serious loss in demand following the close of World War I and as a consequence laid off some 337,000 men, but was revived by the pressing need for ships to replace those sunk early in World War II. Social customs and fashions bring about changes that are often the despair of business men. Presumably because of the almost universal use of the automobile, the demand for shoes has fallen off to an extent that has alarmed the manufacturers. Short skirts decrease the demand for dress goods, but react favorably on the sale of expensive hosiery. Bobbed hair destroys the market for hair nets, but provides an abundance of work for barbers. And so on. Professor Slichter believes that in at least twenty-three industries a major reason, and perhaps *the* major reason, for the shrinkage in employment has been the contraction of markets. Among the industries that have been injured in this way he lists shipbuilding, agricultural implements, the manufacture of carriages, wagons, horse blankets, fly nets, horseshoes, harnesses, whips, buttons, pins, needles, hooks and eyes, hair pins, combs, jewelry, cigar boxes, and sewing machines.

Finding a New Job. We have spoken of unemployment of this kind as consisting of *permanent layoffs*, and have noted the fact that the workers who are laid off are not necessarily slated for *permanent unemployment*. Many of them, after remaining idle for some weeks or months,

find new occupations in other industries. Some, and particularly those who are well along in years, may never again find steady work. But in any case they are probably permanently cut loose from the type of work to which they have been accustomed, unless they should be successful in supplanting other workers doing similar work in other plants, in which case it will be these ousted workers who suffer from permanent displacement. The worker who is laid off because of cyclical or seasonal fluctuations is likely to get his job back with the return of good times or the seasonal peak. But the victim of technological unemployment finds himself in a peculiarly tight place, from which he may be able to escape only by starting his working career all over again, with not only a new employer but a new occupation as well.

The New vs. the Old Job. It seems probable that in most instances the new job is not nearly so satisfactory as the old. Both mental and physical changes, and usually changes for the worse, are wrought by technological unemployment. The worker's confidence in his economic capacity is shaken, for the craftsmanship in which he placed reliance has been scrapped by the march of technical progress. His savings are consumed as, week after week, he looks for work, and he may have to ask for aid from relatives or even from charitable organizations or the public treasury. When he finally succeeds in getting a new job, it is fairly likely to represent a sacrifice in both self-esteem and income. For if, though formerly a skilled machinist, boilermaker, or woodworker, he must now accept employment as counterman in a lunchroom, gasoline station attendant, or night watchman, he can scarcely help feeling that he has lost caste, and his pay envelope will often supply concrete evidence that society regards his present occupation as less important than the work from which he has been ousted.

The Absorption of Laid-Off Workers. Our economic system as a whole is able to absorb, to a large extent, the labor that is discarded by certain industries. New industries are continually springing up, and old ones gaining in importance. Automobile manufacture is the growth of some fifty years, and the commercial development of the radio has taken less than three decades. Forty years ago the motion picture industry was a mere infant. Air conditioning and television are, of course, of still more recent origin. These newer lines of economic activity, and some of the older ones as well, have made great gains in the past decade or two, and not only have provided employment for a large part of the ever-increasing supply of labor, but also have given work to many men and women who have been displaced by mechanical inventions, scientific management, mergers, and changes in consumers' demands. Expansion in building construction between 1920 and 1940 drew 500,000 additional workers into the building trades; the increasing popularity of the automobile added some 700,000 new salesmen and garage workers, and 180,000 workers

in filling stations; and the development of the hotel and restaurant business has given work to possibly a half-million men and women since 1920. Between 1930 and 1940, there was an increase of 176,000 miscellaneous sales people, 624,000 clerical workers, and nearly 600,000 chauffeurs, deliverymen, and similar workers.

United States census figures show that there was an addition of 7,209,000 to the total number of workers from 1920 to 1930 (and of 5,302,000 from 1930 to 1940). This does not mean, however, that there were seven million more persons *actually employed* in 1930 than in 1920, for the census officials include as gainful workers all "persons usually working at a gainful occupation," even though at the time of census-taking they may actually be out of work. There can be no doubt that the expansion of established businesses and the rise of new industries provide employment for large numbers of persons. But we cannot judge from our labor statistics whether developments such as these are capable of taking care not only of the raw recruits of our industrial army, but also of that large group of experienced workers (estimated at between two and two and one-half millions in the "normal" period 1920-27) to whom economic changes bring permanent layoffs. We shall again refer, later in the chapter, to the problem of placing workers who have been permanently laid off from their former occupations.

THE STABILIZATION OF EMPLOYMENT

The Inadequacy of Unemployment Data. Our inquiry into the nature and extent of unemployment has been hindered by the absence of full and complete statistics on the current volume of unemployment and on changes in employment that have taken place throughout the country. When the data used have related to millions of workers, they have almost always been estimates and not exact reckonings; and when they have dealt with small numbers, we could not be certain that our "samples" were sufficiently large and diversified to be representative of the general situation. Nevertheless, the facts that are available indicate the seriousness of the problem of unemployment and the importance of finding a solution to it. To most students of the question it appears that one of the first moves toward a permanent solution must be in the direction of reducing the volume of unemployment through the stabilization of business.

Control of the Business Cycle.¹⁵ In the case of cyclical unemployment, the achievement of stabilization is quite beyond the power of the individual enterpriser. It is true that business men could, if only they would, do something to bring about more stable business conditions by helping to prevent the "booms" of business activity which economists refer to as *periods of prosperity*. For, strange as it may seem, prosperity is the principal cause of depressions, and therefore of unemployment. In times of

¹⁵ The problem of the business cycle is dealt with in chap. 37 (vol. 2).

prosperity, with rising price levels, profits are large and business men wax expansive. "Manufacturers produce goods more rapidly than they are consumed. Merchants load their shelves with inventories. The increased demand for funds for business leads to increased interest rates, with the consequence that new enterprises, like the construction of new buildings, which are dependent upon an ample supply of funds at low rates, are postponed. There thus ensues a period of reduced business activity and reduced employment."¹⁶ If, then, business men in general could be induced to hold their business in check when scientific statistical data indicate that the danger point is being reached, it might be possible to avoid great heights of prosperity and depths of depression, and thus lessen cyclical unemployment. But, since business is conducted for immediate profits, it seems highly improbable that many enterprisers would be willing to make the temporary sacrifice; and an attempt to stabilize business in this way would be fruitless unless it were carried on by a large number of business men. Not only is a single enterpriser powerless to affect the general situation, but if he should check his own business in time of prosperity, when others did not check theirs, he would himself suffer financial loss without appreciably delaying the coming of crisis and depression.

Private vs. Public Control. The inherent weakness of private methods of controlling business cycles has led many persons to endorse the public control of the price level, in the belief that the stabilization of purchasing power would result also in the stabilization of business activity, substituting for our violent cyclical changes in business a slow, steady expansion of industry that would increase production only as fast as was necessary to meet the needs of growth in population and permanently rising standards of living. The soundness of this theory has not yet been tested in actual practice. It appears likely, however, that if business depressions and cyclical unemployment are to be eliminated, it must be through public, rather than private, control of credit, investments, or profits—or perhaps even through government ownership and control of business. So long as the profit motive remains uncurbed, it is hard to imagine an economic society free from business depressions, with their heavy toll of cyclical unemployment.

The Murray-Patman Employment-Production Act. During the past ten years there has been much talk of the possibility of providing "full employment" for all who are able and willing to work, even though it should require large expenditures on the part of the federal government to make jobs available for those who would otherwise be unemployed. In Chapter 37 we shall examine in some detail the line of reasoning which seems to convince many that unemployment could be outlawed through govern-

¹⁶ W. Randolph Burgess, of the Federal Reserve Bank of New York, in *Survey Graphic*, April, 1929, p. 23.

mental spending. At this point, we shall merely note the passage, in 1946, of the Murray-Patman Act, which President Truman called "the beginning of a fight for a healthy economy."

This Act declared it to be the government's responsibility (1) "to coordinate and utilize all its plans, functions, and resources for the purpose of creating and maintaining useful employment opportunities . . . for those able, willing and seeking to work," and (2) "to promote maximum employment, production, and purchasing power." Specifically, this new law authorizes the government to adopt an over-all national economic policy, and provides a moderate amount of machinery for translating this policy into action. The President, assisted by a Council of Economic Advisers, "will set national goals, review current economic trends and the effects upon employment of government activities, and make recommendations for a full employment program." These recommendations will be transmitted to a joint congressional committee, and presumably will be given whatever consideration our national legislators deem appropriate. We shall not know for some time whether this recent piece of legislation will be of any assistance in reducing cyclical unemployment in this country.

The Reduction of Seasonal Fluctuations. In the case of seasonal unemployment, on the other hand, individual attempts to control the situation give greater promise of success than public action. The ideal arrangement, from the point of view of steady employment, would be a spread of production evenly over the twelve months of the year. But there are forces that interfere with a neat system such as this. In some instances—as in the growing of grains and fruits, the manufacture of raw sugar, and the canning of mackerel and salmon—it is the conditions of *supply*, and particularly the perishability of the good, that determine when production shall take place. But much more often production takes its cue from the conditions of *demand*, and experiences seasonal fluctuations because consumers insist on having large quantities of some kinds of goods at certain times of the year and will buy only small quantities at other times.

One careful student of the subject concludes that "the causes of seasonal slumps are, for the most part, climatic; certain commodities enjoy a naturally good sale in cold weather, others in warm."¹⁷ Style, which is not wholly unrelated to weather conditions, plays an important part in some industries, and notably in the manufacture of clothing. The sale of toys and fireworks is naturally greatest just before Christmas and the Fourth of July, respectively. The lure of the outdoors and the bad radio reception often experienced in summer cause the sales of radio receiving sets to be six to eight times as great in the fall as in the spring months.

¹⁷ Edwin S. Smith, *Reducing Seasonal Unemployment*, New York, McGraw-Hill Book Company, Inc., 1931, p. 54.

Tradition sometimes affects the seasonality of a business; building construction, for example, though now carried on successfully in the winter, is still a business which has by far its greatest volume in mild weather. In all of these instances, however, it is the factor of demand that causes the industries to be seasonal.

Examples of Seasonal Stabilization. Since this is true in most instances of seasonal fluctuation, it is the consumers, rather than the producers, who are responsible for the resultant seasonal unemployment. Occasionally the ultimate consumer can be induced by price reductions to buy at "off seasons" of the year, as, for example, in the case of anthracite coal, the price of which is lowered in the spring in order to stimulate sales. But the buying habits of consumers are hard to change, and though some concerns have been able to stabilize sales by price concessions and by advertising the year-round merits of their products, these are obviously schemes which are limited in their applicability. It appears that most persons "want what they want when they want it," and refuse to be inveigled into buying at times suggested by the manufacturer or merchant.

It follows, then, that whatever is to be done in the way of lessening seasonal unemployment must be done chiefly by producers and not by consumers, even though it is the spasmodic buying of the latter that causes the trouble. Some manufacturers have virtually eliminated unemployment by establishing equal monthly production quotas, urging wholesalers to buy somewhat in advance of actual needs (sometimes offering the inducement of price reductions, or billing the goods only as used), and storing surplus stock in warehouses until it can be disposed of. The Packard Motor Car Company, Procter and Gamble, the National Cash Register Company, the International Harvester Company, and at least some dozens of other companies have used plans of this type successfully. The method would not be feasible, of course, with products that are very perishable or subject to sudden changes in style.

Another remedy which has possibilities of extension is the development of "side lines" that can be made during the slack seasons by the same working force as is used in the manufacture of the main product. The Beechnut Packing Company, which once packed only bacon, added peanut butter, chewing gum, crackers, and various kinds of canned goods to fit in with the highly seasonal packing of bacon. A concern manufacturing ice cream cones, which are consumed chiefly in summer, is now also making sugar wafers and candy bars, which find their greatest market in winter. The S. L. Allen Company supplements the manufacture of agricultural implements with the production of children's sleds at certain times of the year. The side line must be chosen, of course, with great care, for not only must it be something that the regular working staff can make, but it should also be a product that the regular sales force can sell. Otherwise, the whole purpose of the scheme will be defeated.

Some, though relatively few, concerns have adopted the so-called "flexible working week" for the purpose of reducing seasonal unemployment. The National Suit and Cloak Company, a large mail-order house with branches throughout the country, used to have very great seasonal fluctuations in their New York office. In remedying this situation, they reduced their normal working week to about forty-four hours. On this basis they established a flexible working week, so that in their peak periods they could work up to fifty-one hours and in their valley periods as few as thirty-nine hours; in other words, they distributed their load among their present people, without reduction of wages. The meat-packing house of George A. Hormel and Company adopted, in 1934, the practice of paying its workers in 52 weekly installments, regardless of the number of hours worked in any particular week; the Nunn-Bush Shoe Company also pays wages to its permanent employees in 52 equal installments; and the Procter and Gamble Company guarantees its employees, after two years of service, not less than 48 weeks of work a year.¹⁸ Other firms that use the flexible working week in some form or other are the Delaware and Hudson Railway, Leeds and Northrup of Philadelphia, and the Columbia Conserve Company.

It should be noted that stabilization of employment by methods of this kind appears to be in conflict with the Fair Labor Standards Act of 1938 which requires the payment of "time and a half" for work done in excess of forty hours a week. Employers interested in stabilization are hoping that means may be found to resolve this apparent conflict.

By-Products of Stabilization. These few illustrations give some idea of the efforts now being made to lessen the volume of seasonal unemployment. It is fair to say, however, that thus far we have merely scratched the surface of this problem. The vast majority of employers have done little or nothing to stabilize production throughout the year. We may expect, however, to see an extension of the regularization of employment as business men come to realize that steady work for their employees is not only good ethics but good business as well. For the best workers tend to seek out those firms that provide regular employment through the year, and are even willing to accept *hourly* wages lower than the current rates, in order to enjoy a larger *annual* income. The assurance of steady work is also the proper antidote for "soldiering on the job," which is frequently practiced in order to avoid temporary layoffs.

This does not mean that we shall soon witness the total disappearance of seasonal unemployment. In dealing with commodities that deteriorate in quality when stored, that are affected greatly by frequent changes in

¹⁸ An excellent summary of efforts to stabilize employment is given in "Reducing Fluctuations in Employment," No. 27 of Studies in Personnel Policy, Supplement to *The Conference Board Management Record*, New York, National Industrial Conference Board, November, 1940.

style, or are so bulky that storage charges are practically prohibitive, the possibilities of manufacturing for stock are seriously restricted, and in many cases are eliminated altogether. Professor Douglas, who has given much thought to the matter, believes that even if manufacturers and merchants could be persuaded to do their utmost to reduce seasonal fluctuations, it is highly improbable that the total amount of seasonal unemployment could be cut by more than one-third. This would be a great achievement, to be sure, but it would not solve the problem completely, for it would still leave (according to Professor Douglas's calculations) a residue of something like 4 per cent, on the average, of our American workers deprived of income by seasonal fluctuations in business activity.

The Handling of Technological Unemployment. Any attempt that might be made to reduce technological unemployment raises at once the perplexing question whether we should try to remove the causes of permanent layoffs, for, as we have seen, these causes consist chiefly of improvements in mechanical and managerial technique or of changes in consumers' demand. It would scarcely seem desirable, from the social point of view, to interfere with the "good management which causes technological unemployment." Better methods of production mean a larger social income, and no nation is as yet so surfeited with goods that it can afford to spurn additions to its volume of commodities and services. It would appear unwise, also, to undertake to block permanent changes in demand, for these changes represent shifts in consumers' purchases made in the effort to maximize satisfactions. The decline of horse-drawn vehicles and the rise of the automobile were changes in demand which doubtless brought technological unemployment to carriage-builders, but the net gain to society in the way of better transportation facilities is beyond question.

Technical Advance and the Volume of Employment. It must be remembered, moreover, that technical progress does not necessarily lead to less work for the employees of the industry affected, or for workers in general. The improvements that are introduced may result in lowered costs and price reductions, bringing the commodity within the purchasing range of a much larger group of buyers and thus increasing greatly the quantity disposed of. This happy sequence of events would be possible, of course, only in the case of goods for which the demand is *elastic*—the total amount expended for the commodity increasing with a reduction in price. The automobile is a commodity of this type, and it is significant that, though tremendous technical advances have been made in the field of automobile manufacture, the normal number of workers in that industry is now greater than ever before. If, because of technical improvements, the price is lowered in the case of a good for which the demand is *inelastic*, less will be spent for that commodity than before,

but the unspent remainder will be available for the purchase of other goods. In this event not all of the old employees could expect to retain their jobs; those displaced by the changed conditions of production would have to look for work in other fields of economic activity.

If monopoly control made it possible for the enterpriser to keep up the price of his product even though technical change had brought a great reduction in the costs of production, his larger profits would be spent for either consumers' goods or capital, and would thus tend to "make work" in other industries for his displaced employees. The economists are correct, then, in their contention that the use of labor-saving devices or better methods of management do not *permanently* reduce the total volume of employment in society. But they may, and often do, throw men out of work *temporarily*, and with quite serious effects upon the individuals concerned. If the men laid off are the least desirable of the working staff (as is likely to be the case), if they are over rather than under forty-five years of age, and if (as usually happens) they refuse to believe that there is no chance of getting their old jobs back, the period of readjustment may cover many months.

Planning for Technological Changes. But though there may be ample reason for insisting that industrial progress shall not be impeded, there is little justification for ignoring the plight of the workers whose loss through technological unemployment is coincident with society's gain. Many employers, as well as others, feel that it is the duty of economic society to lend aid to workers who must make occupational changes because their jobs have been wiped out by the adoption of better methods of production. One way to help is to plan ahead for the introduction of the new arrangement. The major discoveries in industrial technique do not ordinarily come into being overnight, but are developed gradually over a period of months or years. In every business there is a continual loss of employees, resulting from voluntary separations on the part of workers who think they see better opportunities elsewhere. It is often possible to take advantage of this fact, reducing the working force slowly by not hiring new employees to take the places of those who have resigned. By the time the new process goes into operation, the natural flow of labor from the plant has, in part at least, solved the problem of layoffs. Moreover, the new device can often be introduced by degrees, as was shown by Fels and Company in the installation of soap-wrapping machines, each of which did the work of 250 women wrapping by hand. Two machines were needed to handle the firm's output, but the second was not put in until the staff of hand-wrappers had been depleted by death, marriage, and resignation—but not by discharge. It is doubtless true that industry cannot always be so considerate, but business enterprisers should be given to understand that there are certain obligations which they owe to their employees, and that society will not excuse technological un-

employment which might have been avoided through the exercise of foresight and advance planning.

Aid in Making Readjustments. It is not too much to demand that business concerns, instead of casually turning workers loose to shift for themselves, shall first make a genuine effort to transfer them to other work in the same plant, and failing in this try to place them with other firms. Surely this much at least is due men and women who have cast their lot with a business establishment and in many instances have given long years of unstinted service to their employers. The problem is too involved, however, to be solved by employers alone. There is need of vocational guidance for the young, so that they may be warned against going into industries that are in process of shrinkage; need of employment exchanges to offer encouragement and advice in the case of those unavoidably laid off; and need of retraining for those unfortunate workers who, because of conditions over which they have no control, find their occupations gone beyond recall. There should be, then, the development *at public expense* of a definite plan for handling the many and difficult problems that the rush of technical progress is forcing upon us.

PUBLIC EMPLOYMENT AGENCIES

Cyclical, seasonal, and technological unemployment could all be lessened somewhat if provisions were made for placing the unemployed workers promptly in whatever jobs happen to be open. Even in periods of the greatest cyclical unemployment, there are some jobs that remain unfilled simply because the right men do not chance to apply for the openings. We have been remiss in not developing in the United States the machinery for putting unemployed workers in contact with unfilled jobs. As a consequence, many workers, who could be placed satisfactorily under a sound system of employment exchanges, now walk the streets looking despairingly for openings which are unattainable only because their existence is unknown to the jobless.

The Inadequacy of Private Employment Agencies. The agencies we now have for placing labor are far from adequate. There are, for example, several thousand private employment bureaus, but many of these are inefficient or dishonestly operated. Some bureaus charge unreasonably high fees, raise their fees in times of greatest scarcity of jobs, split fees with the foremen who hire their applicants, and indulge in other highly objectionable practices. There are properly conducted private agencies, of course; but so flagrant have been the abuses and so inefficient the services rendered that fee-taking private agencies are not allowed to operate in certain countries. Some employers' associations maintain employment offices, but experience proves that they are likely to degenerate into agencies for blacklisting active unionists and thus prove an obstacle

to union organization and collective bargaining. Strong trade unions sometimes place their members through employment offices of their own, but this arrangement is of no assistance whatsoever to the non-unionists who constitute the great bulk of American wage earners. Philanthropic institutions, such as the Young Men's and Young Women's Christian Associations, frequently attempt to find jobs for applicants, but their scope of activity is necessarily limited.¹⁹

A Public Employment Service. Students of the problem of unemployment are in general agreement that if we are to reduce unemployment to a minimum in this country, we must develop a system of public employment exchanges that is large enough to cover the whole industrial United States. "Since the non-public agencies together fall short of meeting the quantitative needs of employment contract-making, since they leave important fields untouched which in the public interest should be provided for, and they are not well adapted to the requirements either of impartiality or of service on a coordinated national scale, we are led to conclude that the development of a national system of public employment bureaus seems to offer the greatest immediate promise of meeting the unified and growing wants of industry and the community."²⁰

We Americans are not without experience in the business of finding work for the unemployed, for we established in January, 1918, the United States Employment Service, a public agency under the Department of Labor, which at one time had as many as 850 offices in operation throughout the country. Laboring under great handicaps, and with the opposition of private employment bureaus and the National Association of Manufacturers,²¹ the Service placed about two and a half million workers during its period of greatest activity, the year 1919. Later, however, the federal employment offices were taken over by states or municipalities, and the national government's part in the service was confined largely to providing federal aid and exercising general supervision over the several branches of the system. This arrangement was far from satisfactory. In many instances, the offices were poorly located and badly kept. The salary scale was usually inadequate, and the personnel often both incompetent and indifferent. There was little or no coordination and cooperation between the various exchanges, and no uniformity in record-keeping. No serious attempt was made to enlist the support and patronage of business men, who could frequently have rendered invaluable aid in finding work for the unemployed.

¹⁹ The pros and cons of private employment agencies are dealt with in some detail in Paul H. Douglas and Aaron Director, *The Problem of Unemployment*, pp. 266-281.

²⁰ Shelby M. Harrison, *Public Employment Offices*, New York, Russell Sage Foundation, 1924, p. 102.

²¹ The private bureaus wished, of course, to eliminate competition, and the National Association of Manufacturers charged the Service with wastefulness, inefficiency, and bias in favor of union labor.

The Wagner-Peyser Act. These are some of the defects which, coupled with the abuses practiced by the private agencies, led to the passage of the Wagner-Peyser Act in 1933. This Act attempted to remedy the situation by revamping the United States Employment Service, and having it operate a system of employment offices in cooperation with the states. There are public employment offices in every state, about 1600 in all, which provide free service to workers and employers. In some 3100 other places where there are no offices, representatives of the state employment service come at regular intervals to receive applications for jobs, to put employers in touch with suitable workers for job vacancies, and to render other services. In 1938, 1939, and 1940, this federal-state service registered some 45 million applicants for jobs, and made about eight million placements in private employment and two million in public employment.

Nevertheless, this federal-state system of employment service has not been wholly satisfactory. It would seem better to have a chain of offices operated by the federal government than for the federal government merely to give encouragement and aid to employment offices initiated by the several states. Among other things, there is need for a central clearing house of information, so that openings may not go unfilled when there are workers in other states who are able and willing to take the jobs. A nationally operated system of public employment exchanges appears to be one of the prime essentials to the solution of the problem of unemployment. It should be noted that President Roosevelt by Executive Order placed the state employment offices under federal control on December 19, 1941. However, on July 26, 1946, President Truman signed a bill which provided for the return of these employment exchanges, as of November 16, 1946, to pre-war status under state control.

PLANNED PUBLIC WORKS

Another type of public aid that has been widely endorsed is the construction of needed public works in periods of business depression. In the past, we have been inclined to build our post offices and court houses, dig our sewage ditches and subways, and construct state and national highways when business in general was booming rather than during hard times. This custom is doubly wasteful. First, since prices are high in periods of prosperity, the cost of public works in these periods is correspondingly high. In the second place, and of particular importance in connection with unemployment, public construction, if carried on when business in general is depressed, would provide work for many thousands of jobless men. Moreover, the wages paid these men would constitute purchasing power for commodities in the making of which still others would find employment.

Possibilities of Relief Through "Public Works." It is impossible to

say just how much relief might be afforded by the planning of public works so as to level off the peaks and fill in the depressions of private business. To begin with, it must be confessed that we know very little about the total volume of public construction work in the United States. The estimates run all the way from one billion to two and one-half billion dollars' worth of building annually. Doubtless some of this work is urgent and must be completed at once, but there is unquestionably a part—and again we do not know how much—that could be delayed for a year or several years without social loss. If, during years of unusual business activity, a half or even a quarter of the work on public construction could be postponed and reserved for years in which employment is below normal, the effect would be most salutary. Not only would poor business be boosted by the adoption of this arrangement, but good business would be kept from running amuck. "In substance this type of control over public expenditures for construction is analogous to the attempts of central banks to control the volume of credit and through that the volume of business activity. Both methods contemplate the avoidance of inflationary practice; and both, in order to be effective, must come to an arbitrary decision regarding the proper rate of expansion of business activity, of industrial output, of bank credit, or of whatever criterion of inflation may be chosen."²²

Shortcomings of Planned Public Works. Our lack of data and the necessity of exercising arbitrary control are but two of the difficulties encountered in attempting to utilize the construction of public works in the stabilization of employment. Another obstacle to the smooth functioning of the plan is the rather narrow range of jobs available in undertakings of these kinds. Though there may be an abundance of employment for skilled workers in the building trades, and sufficient work to keep thousands of pick-and-shovel men busy, it does not appear just how our displaced salesmen, clerical workers, silk weavers, shoe operatives, and factory employees in general can fit into the scheme. Public works offer little or no direct aid to the women in industry whom unemployment has left without incomes. Public construction, moreover, may be greatly needed in those sections of the country where unemployment is least acute, and may not be called for at all in areas in which the jobless are most numerous. Also, in some cases, much shifting of labor would be entailed, and this is both troublesome and expensive.

Even more serious is the lack of centralization of authority for public building projects, and the consequent inability to control public works through a federal agency. Unemployment of the cyclical type is usually country-wide—sometimes world-wide—and to apply the suggested remedy of planned public works with full success in the United States would re-

²² Leo Wolman, *Planning and Control of Public Works*, New York, National Bureau of Economic Research, Inc., 1930, p. 173.

quire a central agency that not only knows of the contemplated public construction plans of the municipal, county, state, and national governments, but has the authority to modify these plans in the public interest. But the present situation is that the various governmental units control their own expenditures for public works, and ordinarily guard most jealously their rights in this respect. Since probably not more than 10 per cent of the *routine* public construction work in this country is under federal direction, the difficulties of developing a unified system of planned public works are obvious.

The several obstacles that appear to stand in the way of effective planning of public works for the relief of unemployment may eventually be surmounted. They are presented not as proof that a plan of this kind is unworkable, but simply to stress the fact that, despite the glowing optimism of its sponsors, this method of unemployment relief has yet to prove its feasibility.

The Roosevelt administration provided an example of huge expenditure for public works—though, of necessity, hastily planned public works—for the purpose of relieving business depression and promoting recovery. Congress appropriated many billions of dollars for carrying on “relief work,” which consisted of federal public works, conservation projects, highway improvement, non-federal public works, low-cost housing, rural resettlement, and light construction, mainly under the direction of the Public Works Administration and the Works Progress Administration (later called the Work Projects Administration). In some instances, the work was of a strictly federal nature, such as the building of new post offices, but in many cases the government made outright grants to localities up to as much as 45 per cent of the cost of labor and materials on approved projects, and lent the balance at 4 per cent interest.

The chief object of these projects was, of course, to get money into circulation as fast as possible, to carry on undertakings which involved the use of labor (so as to reduce the number of the unemployed), and to provide relief in the guise of work rather than as a direct dole. Since this is true, and since the work done was not a part of a carefully planned, long-run program of public works, it is probably true, as critics of the Roosevelt administration have charged, that a large part of the billions of dollars spent on “made work” was spent uneconomically. It is likewise true, as all social workers know, that indirect relief of the kinds noted above is more costly than a direct dole, if considered solely on the basis of dollars and cents expended; but it may well be worth the extra cost to give men jobs that are not very productive of economic goods, if by so doing we can avoid the loss of morale that goes with the long-continued acceptance of charity.

Unfortunately, this recent experience with public works in time of depression tells us little of what might be accomplished by means of a

thoroughgoing program of planning of the kind we discussed earlier in the chapter. The passage of the Murray-Patman Employment-Production Act suggests that the need for such a program has at last been recognized; and it is reasonable to suppose that we could, with the aid of the President's Council of Economic Advisers, do a better job of handling public works than we have yet done. Though employment increased in volume during the progress of the programs carried on by the Public Works Administration and Works Progress Administration, it is impossible to say to what extent the decline in unemployment should be credited to these agencies. The fact that they provided direct employment to some millions of workers probably does not tell the whole story of their service in this respect. For the gain in employment in many businesses throughout the country must have been due, in large part, to the purchasing

TABLE 27. EARNINGS OF PERSONS EMPLOYED UNDER FEDERAL WORKS PROGRAMS, 1933-1940, INCLUSIVE

(Source: *Social Security Bulletin*, February, 1940, and January, 1941)

1933.....	\$ 521,239,000
1934.....	1,094,895,000
1935.....	923,021,000
1936.....	2,551,683,000
1937.....	2,003,985,000
1938.....	2,488,369,000
1939.....	2,405,148,000
1940.....	2,074,088,000
Total.....	\$14,062,428,000

power placed in the hands of these publicly employed workers. The direct aid to workers, in the form of wages paid to persons employed under the federal work programs during years of severe unemployment, is indicated in Table 27. It will be noted that these earnings were approximately $2\frac{1}{2}$ billion dollars in each of three years, and *averaged* more than $1\frac{3}{4}$ billions annually over the eight-year period from 1933 to 1940, inclusive.

UNEMPLOYMENT INSURANCE

But it is not enough to attempt to stabilize business, to provide for public employment exchanges in order to make the most of whatever work is available, and to try to increase the amount of employment when it is most needed by encouraging public construction in periods of business depression. Despite our best efforts along these lines, it is probable that we shall have an unemployment problem on our hands for many years to come. This means that if we are to prevent distress and suffering in times of unemployment, we must undertake to provide the jobless

with incomes large enough to enable them to buy a sufficient amount of food, clothing, and shelter.

Personal Provision and Private Charity. Heretofore we have gone on the comfortable assumption that the American workingman, if he was industrious and thrifty, could so arrange his finances as to make the fat years take care of the lean. But each recurrent business depression, with its appeals for help for workers and their families, demonstrates the falsity of this assumption. Ordinarily we place the blame for lack of savings on the workers. "When the laborers' pockets are full, they forget that there is such a thing as empty pockets," is a common lament of the well-to-do. The fact is, however, that the vast majority of our workers have never experienced the luxury of a financial surplus. Two studies of the National Industrial Conference Board²³ (a business men's research organization) present some illuminating data on this point. The first shows that the average weekly wage in manufacturing industries in 1927—when, it might be assumed, workers would be saving against possible unemployment in the future, such as that of the post-1929 depression—was \$27.44, or \$1426.88 for a full year of fifty-two weeks. The second of these studies estimates the average minimum cost of living in twelve industrial cities at \$1556.²⁴ For 1937, the Conference Board estimated the average full-time wages at \$1407.64 (average weekly wage, \$27.07), and the cost of living at \$1450. There is no need to point out the difficulty of providing for cyclical unemployment out of wages that, even in good times, are too small to buy a sufficient quantity of economic goods. Since these are *average* wages, there are some workers, of course, whose wages are more than adequate to take care of their *minimum* needs, but there are likewise some whose earnings in most prosperous times are too small to provide them and their families with a "health and decency" standard of living. It is true, of course, that wages are now higher than in 1927 or 1937, but so also are prices. The sad fact is that millions of American families are unable to save from their current income anything like enough to tide them over periods of unemployment.

When those who are always impoverished fall upon the specially hard times of unemployment, we have expected charitable organizations to look after them; and when, as in the great depression of 1929, the resources of organized charity proved wholly inadequate, we have appealed to the public to contribute to relief funds. There are at least three serious objections to this method of procedure. First, the voluntary contributions

²³ *Wages in the United States, 1914 to 1927* (1928), and *The Cost of Living in Twelve Industrial Cities* (1928), National Industrial Conference Board, New York.

²⁴ It is probable that these figures present a more favorable picture than the actual conditions warrant. Professor Douglas estimated the average wage for 1926 at \$1376; and Professor W. I. King, for 1927, at \$1205. Moreover, most social workers consider it impossible to maintain the hypothetical family of four in comfort for less than \$2000 a year, with prices at the 1926 level.

are not always forthcoming, as is shown by the failure to raise a \$5,000,000 relief fund in Philadelphia to meet the urgent needs of 1930-31. Second, this plan does not conform to the generally accepted theory that in meeting public obligations the burden should be distributed on the basis of ability to pay. When giving is "voluntary," some who could give millions give thousands or hundreds instead, and employed workers whose families need their entire earnings are virtually forced to give a day's pay a month, or some other amount set by an employer who wants his firm to show up well in the published list of contributions.

Finally, there is no disguising the fact that assistance coming from donations of this kind is charity, and no one who is able and willing to work should be humiliated by being asked to accept charity. Rather, he should receive whatever he gets as a *right*, and not as a gratuity. Perhaps the world does not owe anyone a living, but it may well be argued that it owes every man a *chance to earn a living*. Surely an industrial society which is so organized that men are denied the privilege of working can properly be charged with the responsibility of maintaining those from whom the means of livelihood are thus withheld. This point was emphasized by Franklin D. Roosevelt in a speech made on the third anniversary of the passage of the Social Security Act of 1935, in which he said: "The millions of today want, and have a right to, . . . the assurance that with health and the willingness to work they will find a place for themselves in the social and economic system of the time."²⁵

When emergencies arise calling for the expenditure of large sums of money, this money, though perhaps borrowed immediately, should come ultimately from revenue derived from taxation. This is the one sure way of obtaining whatever funds are required, and the most likely way to spread the burden so that it will cause a minimum of sacrifice. In the case of unemployment funds, they should be paid to the jobless as a frank acknowledgment of society's failure to measure up to its obligation to provide work for those who want it. And society can scarcely be said to be discharging this obligation with undue liberality when it gives (as, according to Professor Paul Douglas, it gave during the post-1929 depression) its involuntarily unemployed an average of \$20 per month per family.

The Principle of Unemployment Insurance. But a better plan for enabling the unemployed to survive hard times has been in use in Europe for a long time, and in the United States for something more than a decade. We refer to unemployment insurance, which aims to apply to the problem of unemployment the well-known principle of risk-spreading. Unemployment, like fire and death, is the portion of some, but not all, in a given period, but no one can predict with certainty just which members of the group will be afflicted. It is possible, however, to

²⁵ *The New York Times*, August 16, 1938.

insure against the economic dangers of an evil such as unemployment, through the regular collection of small premiums for all who *might* suffer temporary or permanent layoff and consequent loss of income, and the payment of benefits to those to whom unemployment actually comes. The benefits that can be paid depend, of course, upon the size of the premiums, but care is always taken to see that these benefits are not so large as to make unemployment attractive to workers.

In unemployment insurance, there is the possibility that the funds provided by collecting premiums may prove inadequate for the payment of promised benefits if the period of unemployment is unexpectedly extended and severe. This, indeed, was the experience of the British, who found it necessary, upon the exhaustion of their unemployment "reserves" during the long siege of unemployment that followed the close of World War I, to pay relief benefits provided through receipts from taxation.

Unemployment Compensation Under the Social Security Act of 1935. The passage of the Social Security Act in August, 1935, marked the first attempt of the people of the United States to provide unemployment compensation on a nation-wide basis. Wisconsin and one or two other states had already adopted insurance of this kind, but the movement had been held back by the fear that in passing laws that made unemployment insurance compulsory a state would place its industries at a disadvantage in competition with industries in states which had no such laws.

The unemployment section of the Social Security Act solved this particular problem by imposing a federal tax of 1 per cent for 1936, 2 per cent for 1937, and 3 per cent per annum thereafter, on payrolls in general throughout the United States. The federal government itself does not provide unemployment insurance, but it encourages the states to do so, by allowing employers to credit as an offset against their federal tax any amounts which they contribute under an approved state unemployment fund, except that the total credit may not exceed nine-tenths of the federal tax for any given year. This one-tenth of the tax, which must be paid to the federal government in any case, is used to assist the states in the administration of their unemployment plans.

Since the employers in every state must pay a 3 per cent payroll tax, either to the federal government or to the state and federal governments combined; since the federal government has removed the fear of putting the employers of one state at a disadvantage in comparison with those of another, by making the tax nation-wide; since it offers the states financial assistance in paying the costs of administering their insurance plans; and since none of the money will be spent within a state unless a local unemployment insurance plan is adopted, it is evident that a state has much to gain, and little if anything to lose, by giving its people the protection of unemployment insurance. The result, as has been charged by opponents

of the plan, is a system of unemployment compensation which is virtually forced upon the states by the federal government.

Among the specific standards to which every state insurance plan must conform are the following: The benefits that go to the unemployed must be paid through "public employment offices in the state or such other agencies as the Social Security Board may approve"; all monies received by the states in their unemployment funds must be paid over at once to the Secretary of the Treasury, to be placed in the Unemployment Trust Fund, and all money withdrawn by the states from the Fund must be used solely for paying unemployment benefits; benefits must be paid to those who would otherwise be eligible if these unemployed workers refuse to accept new jobs (1) because "the position offered is vacant due directly to a strike, lockout, or other labor dispute," (2) because "the wages, hours, or other conditions of the work offered are substantially less favorable to the individual than those prevailing for similar work in the locality," or (3) because acceptance of the job involves signing a "yellow-dog" contract; and, finally, the states must reserve the right to alter the plans at will.

TABLE 28. ANNUAL PAYMENTS MADE UNDER FEDERAL-STATE UNEMPLOYMENT COMPENSATION PROGRAM, 1938-46

(Source: *Social Security Bulletin*, February, 1947)

Year	Total Payments
1938	\$ 393,786,000
1939	420,298,000
1940	518,700,000
1941	344,321,000
1942	344,084,000
1943	79,643,000
1944	62,385,000
1945	445,866,000
1946	1,095,476,000

Unemployment Compensation in Operation. By July, 1937, unemployment plans had been adopted by all of the forty-eight states, the District of Columbia, Alaska, and Hawaii. By July, 1938, twenty-eight states were already paying unemployment benefits, and by July, 1939, the unemployment compensation laws of all the states had been in force at least two years, so that all states had by that date attained full benefit-paying status.

The total annual amounts that were disbursed in the form of unemployment benefits from 1938 to 1946, inclusive, are given in Table 28. The total benefits for the nine years amounted to more than three and a half billion dollars, with an annual average of \$411,617,000. About thirty-six million persons have established "wage credits" under the provisions of the Social Security Act, and are thus made eligible to draw

benefit payments in time of unemployment. In 1946, 4½ million workers drew unemployment benefits. The average *amount of benefit* was \$18.50 a week, the average *period of benefit payments* was 13.4 weeks, and a total of \$1,095,476,000 was paid in benefits during the year.

Shortcomings of the Plan. The principle of social security now seems to be firmly established in the United States. Says *Fortune*, following a 1947 survey of public opinion on this issue: "Americans of every class have come to believe that it is the duty of the government to provide security for its people. Almost no one would like to weaken Social Security; indeed pluralities, or majorities, in every economic class and occupational group would extend it."²⁶ It seems clear that this federal-state provision for unemployment insurance falls short of meeting the needs of the country for protection against involuntary idleness. First of all, though some of the states do include all employees in their unemployment plans, the Social Security Act itself fails to cover those workers who are employed in establishments not having a labor force of at least eight workers for at least twenty days a year (each day being in a different calendar week), and workers who are employed by relatives. It excludes, also, all agricultural workers, domestic servants in private homes, officers and crews engaged in shipping in United States waters, public employees, and employees of non-profit-making organizations. Because of these exclusions, it is probable that not more than two-thirds of our "gainful workers" enjoy unemployment benefits under the Act. On this point, Franklin D. Roosevelt said, in 1938: "To be truly national, a social security program must include all those who need its protection. Today many of our citizens are still excluded from old-age insurance and unemployment compensation, because of the nature of their employment. This must be set aright; and it will be."²⁷

Another weakness of the plan is its lack of uniformity as between the states. To the lawmakers of the individual states is left the vital matter of the degree of security the workers are to enjoy. The result is federal-state unemployment insurance of many varieties. The *maximum* pre-war weekly benefit payment was \$15 in forty states (or jurisdictions), \$16 in five, and \$18 in six; the *minimum* weekly payment (when specified) ran from \$1.50 in North Carolina to \$10 in California. But the weekly benefits actually paid in 1940 for total unemployment ranged from \$4.68 in North Carolina to \$14.14 in California, with an average of \$10.57 for the country as a whole. The average *annual* benefits paid in 1940 were \$100.15 per worker for the country, with a low of \$42.60 in South Carolina and a high of \$174.12 in California. Workers must usually be out of work for two to three weeks before benefit payments begin, and in most states the maximum number of weekly payments a worker can receive in a year is sixteen,

²⁶ *Fortune*, March, 1947, p. 18. This survey was cited also in chap. 24.

²⁷ *The New York Times*, August 16, 1938.

though in five states it is twenty-six. The maximum benefits were raised in some states during World War II, and now go as high as \$22 a week.

It is reasonable to suppose that if industries can build up surpluses from profits for the payment of dividends in lean years, as they now do, they can likewise afford to contribute, and should be compelled to contribute, to unemployment insurance funds from which benefits can be paid in periods of enforced idleness.²⁸ The compulsory feature of the Social Security Act is important, for American experience has shown that employers are slow to adopt social insurance of any kind, unless required to do so. In only five states are the workers required to contribute to the unemployment funds, so that the burden at present falls almost wholly upon the employers. But it seems desirable that the federal government also should contribute to the unemployment reserve funds, not only to make possible the payment of larger benefits, but also to emphasize its responsibility in failing to remedy cyclical fluctuations (which, as we have seen, are not directly chargeable to individual concerns) and to justify the control of these reserve funds by the government. Unemployment is not only a local but a national problem as well; and we feel strongly that unemployment insurance, like public employment exchanges, should be administered on a country-wide basis by a federal agency.

The Railroad Unemployment Insurance Act of 1938. Three years after passing the Social Security Act, Congress produced a new unemployment compensation plan which applies to workers on railroads engaged in interstate transportation. This plan, as provided for in the amended Railroad Unemployment Insurance Act, places a uniform 3 per cent payroll tax on employers, and grants benefit payments which are weighted in favor of workers in the low-wage groups. There are seven classes of benefits, ranging from \$1.75 to \$4 a day for time lost through unemployment, with a maximum benefit of \$17.50 to \$40 for any fourteen-day period. The maximum annual benefit for an individual worker is \$175 to \$400, depending upon his classification. The million or more railroad employees who come under this plan are, of course, no longer covered by the provisions of the Social Security Act.

This program of strictly federal unemployment insurance has several points of superiority over the federal-state plan which we have had since 1935. It is uniform throughout the country, so that the workers who are covered receive benefits which are not dependent upon the liberality of state legislators. It pays benefits that are substantially larger than those paid under the provisions of the Social Security Act. It favors the lower-paid workers, upon whom unemployment usually falls most heavily. It is

²⁸ Dividends and interest paid in the United States were \$428,500,000 greater in 1930 than in 1929, while wage payments fell off \$9,600,000,000, according to estimates of the Standard Statistics Company.

far simpler to administer than the Act of 1935, since it avoids the many complications which are inherent in a federal-state system.

Need for a National Unemployment Program. The Railroad Unemployment Insurance Act seems to point the way for definite improvements in our broader system of unemployment compensation. For the sake of efficient and economical operation, our present hybrid scheme should be replaced by *national* unemployment insurance. In the interests of adequate compensation, without which an insurance plan is mere pretense, we should increase the benefit payments until they at least equal those now prescribed for the railroad workers. And in the name of common justice, we must expand the program to admit the large groups of workers who are now without protection against the hardships of involuntary idleness. The Social Security Board has urged that the coverage of the federal-state unemployment plan be extended to those who are not now included, that the maximum benefits for full-time unemployment be made not less than \$25 a week, and that benefits be payable for a total of at least twenty-six weeks in a year.²⁹ Under the provisions of the Servicemen's Readjustment Act of 1944, commonly known as the "G.I. Bill of Rights," unemployment benefits of \$20 a week, for a maximum of fifty-two weeks, were granted to veterans of World War II who had had at least three months of service, but this was a temporary expedient designed to aid the returned soldier in making adjustments to a peacetime economy.³⁰

Conclusion. In dealing with the problem of unemployment, we have often been able to give only a page or two to the description of phases of the subject about which whole volumes have been written. Our treatment represents, therefore, only the barest outline of the problem and the plans proposed for its solution. The seriousness of the unemployment problem is undeniable. So far as remedies are concerned, there is little that can be said with assurance. The truth of the matter is that we are just beginning to give this problem the attention that it deserves. What does seem reasonably clear is that in relatively few cases are the workers themselves responsible for unemployment or for the lack of savings to tide them over the period of enforced idleness. The responsibility lies, rather, with individual employers and especially with the industrial system as a whole. Consequently, it is the duty of business men and of the state to see to it that the volume of unemployment is cut down materially, and that whatever part remains shall not be allowed to bear too heavily upon those affected. It is believed that earnest attempts to stabilize business, to control the construction of public works, to improve our facilities for the retraining of workers, to provide jobs through public employment ex-

²⁹ 9th Annual Report, 1944, of the Social Security Board, pp. 8, 9.

³⁰ According to an Associated Press dispatch of March 8, 1947, jobless veterans had by that date drawn almost two billion dollars in unemployment benefits under this Act, and 217,841 former service men had entirely exhausted their special veterans' unemployment allowance. (*The New York Times*, March 9, 1947.)

changes, and to develop a sound system of unemployment insurance, can do much to solve this most serious of the several problems of economic insecurity.

1. "One of the distinctive features of modern economic life is the separation of the worker from ownership of the tools with which he performs his daily tasks." What has this fact to do with the problem of unemployment?
2. "The loss of a job may spell tragedy." Why? Describe the sort of tragic consequences that result from the inability to get steady work.
3. Distinguish carefully between the several types of unemployment.
4. Summarize the unemployment situation in the United States in the post-1929 depression.
5. In what years in the twentieth century has cyclical unemployment been especially severe?
6. Name several industries in which production is highly seasonal, and explain why it need be seasonal in these particular industries.
7. Professor Slichter speaks of technological unemployment as consisting of *permanent layoffs*. Describe the most important causes of such layoffs.
8. Stuart Chase has written an article about a gigantic new machine which turns out 10,000 automobile frames a day. "When those frames were made by the old 'hand' process," he says, "it took 2000 men to produce 10,000 frames a day. The machine has eliminated 90 per cent of the sometime operating force."
 - a. What type of unemployment has been caused by the use of the machine?
 - b. Is it probable that the displaced workers will be permanently unemployed?
9. Are *permanent layoffs* and *permanent unemployment* synonymous? Explain.
10. Explain Mr. Lewisohn's statement that "unemployment may be due to bad management which creates seasonal unemployment or good management which causes technological unemployment."
11. If this statement is correct, should we not welcome rather than decry technological unemployment?
12. Discuss the special difficulties that confront the worker who is made idle by technological unemployment.
13. What is the goal of the Murray-Patman Act, and what is the nature of the procedure through which it is hoped to reach that goal?
14. In what ways are private employment agencies inferior to a nation-wide system of public employment exchanges?
15. What was the purpose of the Wagner-Peyser Act? To what extent has it been achieved?
16. Discuss the public works programs of the federal government in the post-1929 depression.
17. What are the advantages of relief through public works as compared with a direct dole? The disadvantages?
18. Describe briefly the unemployment insurance provisions of the Social Security Act of 1935.

19. Discuss our experience with federal-state unemployment insurance from 1935 to 1945.
20. State the defects of this program of unemployment insurance.
21. What can be said for and against a system of unemployment insurance, financed wholly by the employers and the state, with benefits paid as a *right* of the unemployed and not as *charity*?
22. In what respects is the unemployment insurance plan for railroad workers superior to the federal-state plan set up under the Social Security Act?

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Economic Insecurity: Accidents, Sickness, Old Age

WE CONTINUE IN THIS CHAPTER OUR EXAMINATION OF THE PROBLEM OF economic insecurity, of which unemployment is a major item. In dealing with unemployment we considered men and women who are both able and willing to work, if only they are given the opportunity; but in the case of accidents, sickness, and old age, we direct our attention to those who either are physically incapacitated or have reached an age at which industry has no further use for them. The economic consequences are here much the same as the consequences of unemployment. Without jobs, whatever may be the cause, these "dislocated soldiers of industry" are likewise without incomes, and lacking incomes they are faced with the problem of needing economic goods but having no purchasing power. The problem here, therefore, as in all instances of economic insecurity, arises from the fact that human wants continue as long as life itself, regardless of whether or not the means of satisfying these wants are available.

INDUSTRIAL ACCIDENTS

The Terms "Accident" and "Injury." In discussing the subject of industrial accidents, it is rather common practice to use the words "accident" and "injury" as though they were synonymous. Mr. H. W. Heinrich, a leading authority on accident prevention, points out that this is by no means true, and that much confusion may be avoided by a correct use of the terms.¹ An accident, says the lexicographer, is "an event that occurs without one's foresight," whereas an injury is "any wrong, damage, or mischief done or suffered." Happily, not all accidents result in injuries. And yet, such data as we have relate almost exclusively to industrial *injuries* which are almost invariably referred to as industrial *accidents*. The significance of the distinction will appear in our treatment of the costs and prevention of accidents.

The Number of Industrial Injuries. Our records of industrial accidents

¹H. W. Heinrich, *Industrial Accident Prevention*, New York, McGraw-Hill Book Company, Inc., 2nd ed., 1941, pp. 30-35. (We shall cite also, in several instances, the first edition of this work.)

are far from satisfactory. In four states (Arkansas, Florida, Mississippi, and South Carolina) no records are kept of industrial accidents or injuries, and in the other forty-four states the figures refer chiefly to injuries for which benefits have been paid under the workmen's compensation acts. But a careful study of such information as we have leads to the estimate that there are some 17,000 fatal industrial accidents in the United States annually, 1,400,000 industrial accidents causing injuries that result in some loss of time, and more than 40,000,000 minor industrial accidents resulting in injuries that require but little attention. Since "for each accident producing a personal injury of any kind (regardless of severity) there are at least ten other accidents,"² we arrive at the conclusion that some 400,000,000 accidents occur in American industry every year.

Direct and Indirect Costs of Injuries. If we try to express these industrial injuries in terms of monetary cost, the figures arrived at are appalling.

TABLE 29. DIRECT AND INDIRECT COSTS OF INDUSTRIAL INJURIES
(Source: H. W. Heinrich, *Industrial Accident Prevention*, 2nd ed., pp. 52-61)

Accident No.	Type of Industry	Direct Costs	Indirect Costs
1	Building construction.....	\$209.00	\$ 937.00
2	Hardware manufacture.....	66.00	275.00
3	Not specified.....	0.00	154.00
4	Woodworking plant.....	59.00	262.00
5	Machine shop.....	11.00	49.00
6	Trucking.....	25.00	140.00
7	Woodworking plant.....	86.50	379.50
8	Clothing manufacture.....	50.00	230.00
9	Drop-forge plant.....	22.00	107.00
	Total.....	\$528.50	\$2533.50

Under compulsory state legislation, more than \$240,000,000 in benefits is paid out annually to those who have suffered industrial injury, or to their dependents, and more than \$70,000,000 additional for medical services. But compensation payments represent only a fraction of the total costs. Professor Edison L. Bowers has estimated that all types of industrial injuries taken together cause an annual loss of more than 280,000,000 working days, and a wage loss of over a billion dollars. When compensation payments, wage losses, the costs of medical attention, and indirect losses in production are brought together, the total annual loss, Professor Bowers feels, can scarcely be less than four billion dollars.

The importance of *indirect* as compared with *direct* costs of industrial injuries is frequently overlooked. It is easy to see that payments for workmen's compensation and medical care for the injured are costs that are entailed by the failure to prevent accidents. But it has been found, by

² For the calculations by which these estimates are reached, see *ibid.*, pp. 26, 27, 50.

analysis, that these direct costs are not more than one-fourth as great as the indirect or "hidden" costs that must be met by the employer, but often are not charged against industrial accidents. The items of indirect costs—that is, those costs over and above payments for compensation and medical aid—are time lost by injured employees but paid for directly by the employer, time lost by other employees (out of curiosity, sympathy, or desire to assist), time lost by foremen and superintendents, spoilage of material, breakage of tools, and so on. Table 29, which is made up from nine cases taken from actual experience, shows the monetary significance of the indirect costs of industrial injuries. With cases such as these before us, it is not hard to believe that the "by-products" of industrial accidents are four times as costly as the compensation and medical payments.

We must not quit the subject of costs without reference to the *human* costs involved in industrial injuries. Costs of this kind are, of course, quite incalculable. It is true that state compensation laws undertake to evaluate arms, legs, eyes, and other scraps of human anatomy in terms of dollars and cents; but who would feel fully recompensed if he received in exchange for an arm, as he would in Ohio, a maximum of \$18.75 a week for two hundred weeks? To the personal costs of suffering and lifelong physical impairment must often be added a serious loss in earning capacity, and consequently a lowered standard of living. Here are human costs that not only affect the injured man, but bear heavily upon his wife and children as well, as in the case of unemployment.

The Causes of Industrial Accidents. Industrial injuries result from industrial accidents, but what are the causes of the accidents themselves? Until we have found the answer to this question we lack the knowledge essential to the prevention of industrial casualties of this sort. Nor is it enough to know that the injury was brought about by a fall, a blow, or an explosion. We must know what caused the fall, or blow, or explosion, before we can hope to prevent such accidents in the future. The best practice, therefore, in analyzing the conditions that lead to human injuries is to work back from the *injury* ("the wrong, damage, or mischief done or suffered") to the *accident* (the "event that occurs without one's foresight") and thence to the cause of the accident, so that the cause may be removed and a repetition of the accident prevented.

Contrary to popular notion, industrial accidents are not very largely the result of unguarded machinery, open elevator shafts, defective ladders, and other unsafe working conditions that might easily be remedied. It is doubtless true that such causes were once responsible for many and serious injuries, but progress in managerial methods and state legislation have wrought remarkable changes in the physical equipment with which men now work.³ In seeking the causes of industrial accidents, we cannot do

³ As witness the elaborate and ingenious safety devices described by picture and print in H. W. Heinrich, *Industrial Accident Prevention*, 2nd ed., pp. 168-259.

better than examine a study of 75,000 cases analyzed by the Travelers Insurance Company. This investigation disclosed the fact that, according to the customary but improper method of analysis, 25 per cent of these accidents would have been charged to physical or mechanical causes in the plant, but that in reality many accidents falling within this 25 per cent were attributable, wholly or in part, to faulty supervision. The conclusion finally reached was that 10 per cent of the 75,000 accidents were properly chargeable to physical causes, and 88 per cent to supervisory causes, while 2 per cent only were classed as unpreventable.

Since the number of cases entering into this study was sufficiently large to constitute a fair sample of industrial accidents in general, we shall note very briefly the physical and supervisory shortcomings that accounted for these 75,000 accidents. The physical causes listed were unguarded or ineffectively guarded mechanical, electrical, steam, and chemical conditions; congestion and faulty storage of materials; defective machines, tools, and materials; inadequate fire protection and exits, and unsafe floors and openings; improper ventilation, sanitation, and light; faulty layout of operations and machinery, and unsafe processes; and unsuitable dress (such as long sleeves and high heels) and the absence of goggles, gloves, and masks. The defects on the side of supervision were faulty instruction; inexperience, lack of skill, ignorance, and poor judgment of employees; poor discipline, including disobedience and "fooling"; inattention and the distraction of attention; such unsafe practices as "chance-taking," haste, and "short cuts"; mental unfitness, including fatigue, violent temper and excitability; and physical unfitness, such as bodily defects, weakness, and fatigue.⁴

Industrial Accident Prevention. Even though we assume that the cases investigated by the Travelers Insurance Company are strictly representative, and that as a consequence 98 per cent of *all* industrial accidents are preventable, it is too much to expect that so high a percentage will actually be prevented. "Some persons, and among them not a few safety engineers and government officials, feel that the limit has been reached in accident elimination; that information about injuries, both fatal and non-fatal, from now on, must be received as a matter of course. . . . But such an assumption seems to be unwarranted," says Professor Bowers. Mr. Heinrich believes that "it is entirely possible and practicable to achieve *at least a 50-per-cent reduction in present accident frequency and accident cost* and that this may be accomplished speedily with very little expenditure of money and by the use of executive machinery which is already established."⁵ Even more optimistic was the Committee on Elimination of Waste in Industry of the Federated American Engineering Societies. The estimate of this Committee was that 75 per cent of all loss from industrial

⁴For the details of this important study, see *ibid.*, pp. 102-111.

⁵*Ibid.*, 1st ed., p. 64.

accidents could be eliminated if proper attention were given to accident prevention.

Certainly the records of some of the achievements in accident prevention are most encouraging. The United States Steel Corporation eliminated 64 per cent of its serious accidents in the period from 1906 to 1929, and 88 per cent of loss-of-time injuries, thus saving 58,533 men from serious injury and 433,205 from injuries that would have caused them to lose some time. By means of accident prevention work, the Fisk Rubber Company saved 10,120 men from injury from 1918 to 1929, preventing loss of wages to the amount of \$700,000 and saving \$300,000 in compensation insurance premiums. The Boston Elevated Railway succeeded in reducing the *number* of accidents, from 1927 to 1928, by 20 per cent, and in cutting the *cost* of accidents by 33 per cent.⁶ The effectiveness of accident prevention work is often reflected in the rates charged for workmen's compensation insurance. For example, the quarry insurance rate in Pennsylvania is \$3.60 per \$100.00 of payroll; in Alabama, \$4.77; Indiana, \$5.32; Illinois, \$6.57; Kansas, \$7.44; Georgia, \$7.76; Maryland, \$7.99; and New York, \$9.87. It can scarcely be doubted that the low rate in Pennsylvania, which is the lowest in the United States, is related to the admirable safety work conducted in quarrying in that state, and which in one two-year period brought a decrease of 22 per cent in fatal accidents and 14.5 per cent in non-fatal injuries.

We cannot undertake to discuss the details of accident prevention, but must be content to indicate the general principles which have been applied successfully in bringing about reductions in accidents and injuries. Mr. Heinrich lists four such principles: (1) the development of executive interest and participation; (2) accurate analysis of causes; (3) selection and application of remedies; and (4) the enforcement of corrective practices. The point of attack should be the accidents that occur, and not merely the injuries suffered. Not only lost-time accidents, but *all* accidents, whether or not they result in injuries, are worthy of investigation. If a workman falls but is not hurt, good practice demands that the cause of his fall be studied, since the fall constitutes an *accident* which, if repeated, might easily result in *injury*. "In prevention work, the importance of any individual accident lies in its *potentiality* of creating injury and not in the fact that it actually does, or does not, so result."⁷ Every accident, then, must be investigated and its cause determined, measures to prevent its recurrence must be devised and adopted, and the executives must see to it that the precautions prescribed are rigidly adhered to. It is only by strict adherence to a definite program that business concerns achieve great reductions in accidents and injuries such as have been cited.

Workmen's Compensation. But the best that can be done in the way

⁶ *Ibid.*, pp. 8, 9.

⁷ *Ibid.*, p. 88.

of preventing accidents will leave the problem only partly solved. For the total elimination of occupational injuries seems to be unattainable, and so long as any industrial casualties of this kind occur there will be doctor's bills to pay and families to provide for in the event of death or during the period of recovery. All the states but Mississippi have decided that the employers of the injured workers shall help to meet these expenses. In these forty-seven states (and also in the District of Columbia, Alaska, Hawaii, Puerto Rico, and the Philippine Islands), workmen's compensation laws have been enacted, requiring the employers to provide in advance for the payment of a proportion of wages to their employees when the latter are unable to work because they have suffered industrial injury. In addition to these laws, there are two federal compensation acts—the Civil Employees Compensation Act, providing for payments by the government to any of its employees who may be injured, and the United States Longshoremen's Act, specifying the compensation to be paid by employers to longshoremen and harbor workers in case of industrial accidents resulting in injury.

There are many workers in the United States, however, who are not covered by workmen's compensation laws. Most of the state laws make no provision for farm labor, domestic help, and itinerant or casual workers. Workers in industries of special importance in particular states are in some instances deprived of this protection. Those employed in logging in Maine, cotton-ginning in Texas, and distilling in Kentucky are specifically excluded from the benefits of compensation laws; and some 1,500,000 transportation workers, because they are in *interstate* and not *intrastate* commerce, are not covered by compensation legislation. Concerns employing not more than three workers in Ohio, four in New York, and sixteen in Alabama, are not required by their respective states to pay compensation to injured employees, unless the employees are able to get awards through civil suits. Taking the country as a whole, it seems probable that about 80 per cent of all the workers are given protection under the several compensation laws.

The amount of protection enjoyed varies considerably from state to state. Disability benefits usually take the form of weekly payments, beginning after a waiting period of about seven days and extending over a specified length of time. The laws specify that the payments shall consist of a certain percentage of the worker's regular weekly wage. In this matter there is no uniformity between states, the percentage depending upon the liberality of the law, the type of injury sustained, and the number of persons being supported by the injured worker. In most states there is a maximum limit to the amount of the weekly payment that an employee may receive as compensation, with the result that the actual payment is often considerably less than the percentage provision of the law. The *percentage*, for example, may be 66%, and the *maximum limit* \$20.00 a

week, in which event a worker whose regular wage is \$45.00 would draw not 66⅔ per cent of that amount, or \$30.00 a week, in compensation, but only \$20.00 (the maximum prescribed by law), or 44⅔ per cent of his usual income. In a few states the maximum weekly payment is as high as \$25.

The number of payments that can be collected depends, again, upon the nature of the injury. In Ohio, the loss of an arm means 200 weeks of compensation; the loss of a leg, 175 weeks; of a hand, 150 weeks; a foot, 125 weeks; an eye, 100 weeks; and a thumb, 60 weeks. In most states there is a maximum period for the payment of benefits, regardless of the seriousness of the injury. The highest maximum that has been set is 520 weeks in Connecticut, and probably the lowest is the 150 weeks in Idaho. Moreover, it is customary to set a maximum monetary award for total or partial disability. This award is occasionally as high as \$8000, but is usually considerably less. Maximum death benefits, under workmen's compensation acts, range from \$3000 to \$15,000, and here again there is no uniformity as between states. The payments made to the United States government employees are somewhat more liberal than the compensation provided for by state laws. An injured government worker receives two-thirds of his regular wages (with a monthly maximum of \$116.66) during the period of total disability, and after his return to work a payment amounting to two-thirds of the difference between his earnings before and after the injury. In many instances, of course, he is able to return to his former job or take a position equally well paid, in which case compensation stops immediately. It should be added that in thirty states the workmen's compensations also cover all or certain specified occupational diseases.

Proposed Changes in Compensation Procedure. No one who knows the facts can fail to see that the present situation is socially a vast improvement over the chaotic state of affairs that existed before the passage of workmen's compensation laws. In those dark ages the payment of benefits was either voluntary on the part of the employer or contingent upon the injured worker proving in court that the employer was legally responsible for the accident and liable for damages. The uncertainties and costliness of litigation led to the frequent settlement of claims, out of court, for pitifully small sums. A major injury, such as the loss of an arm or leg, might result in the payment of a few dollars or hundreds of dollars, or at times in no payment at all; and there are many instances of death claims being settled for as little as \$100, or even less. The elimination of the need to prove the employer's responsibility, and the much larger awards that are now made, constitute real progress in the handling of this particular problem of economic insecurity. The fact that workmen's compensation is now taken as a matter of course and is generally regarded as an essential feature of our industrial system is a striking illustration that sweeping changes in labor legislation may, when they are being made, give rise to

loud and bitter protests, and yet in comparatively few years be accepted as wholly beneficial to all concerned, for compulsory workmen's compensation had its beginning in the United States only in 1910.

But though the situation is greatly improved, our method of dealing with industrial injuries today is still far from perfect. For a system to be entirely satisfactory it must, first of all, provide abundantly for the economic needs of the injured worker and his dependents, and, in the second place, supply an incentive sufficiently strong to effect a steady reduction in the number and severity of injuries. In view of the amount of compensation provided by the average state law, we can scarcely claim that we "provide abundantly" for those injured by industrial accidents. Since the maximum weekly benefits range from \$12 to \$25, or \$624 to \$1300 per year, while the amount necessary for the maintenance of a minimum standard of living is set by experts at \$1500 to \$2000 a year, the inadequacy of the payments is obvious. Moreover, the maximum number of weekly payments and the maximum monetary award specified by law do not guarantee, by any means, that even the payments of \$12 to \$25 a week will extend over the whole period of disability. In twenty states only does compensation continue for life in the event of total disability. Medical service, which is provided for in the workmen's compensation laws of all states, is often quite inadequate, being limited in some instances to a few weeks or months, and, again, by a maximum expenditure of a very moderate amount, say \$150 or \$200. Death benefits are definitely limited in all but seven states, amounting usually to about three times the annual earnings of the deceased.

When workmen's compensation first gained prominence in this country, it was hoped and confidently expected that the desire to keep insurance rates down to a minimum would lead employers to guard the safety of their workers so diligently that the number of industrial fatalities and injuries would be materially reduced. It is impossible to say definitely to what extent the introduction of workmen's compensation has furthered the good work of accident prevention. Certainly the predictions made by the early champions of compulsory compensation have not been fully realized. Some excellent prevention work has been done, as we have seen. But in many plants production seems to be conducted in much the same manner as before, with little attention given to safety work, and insurance premiums charged against costs of production as a necessary and unavoidable expense. It would appear, then, that employers in general are not yet convinced that it is cheaper to prevent accidents than to pay compensation. We have failed, therefore, to meet the second requirement of a sound system of accident compensation, which, as we have already noted, is to provide an inducement that will lead employers to give proper attention to the prevention of industrial accidents.

It seems probable that the goals of *adequate compensation* and *accident*

prevention can best be reached through the agency of a substantial increase in compensation benefits of all kinds. This increase not only would add to the comfort of the injured workers and their families, but, unless it was accompanied by a sharp decline in the number and seriousness of injuries, would inevitably be paralleled by a material increase in insurance rates. By making accidents very expensive to employers, it should be possible to arouse wider interest in thoroughgoing safety work. For the arrangement to work out satisfactorily, it would be necessary to continue the use of a principle now employed in many states—that of making adjustments in insurance premiums, so that concerns having a heavy casualty record are required to pay high rates, and those having few workers injured each year pay much lower premiums. In this way, the burden is placed where it rightly belongs, on the careless, irresponsible firms; and it is probable that, if the benefits were increased materially, the necessity of meeting these high payments would either force these unprogressive concerns to mend their ways, or drive them out of business.

The extent to which benefits would have to be raised in order to provide adequate compensation and stimulate accident prevention would be determined by careful investigation and experimentation. There is much to be said for continuing a man's wage *in full* during the period of his total disability, so that he and his family shall not be compelled to lower their standard of living. If, upon recovery, he is unable to perform his old tasks and must accept low-paid work, he might well expect to have his loss made up by the payment of compensation benefits. There is, of course, the danger of malingering to be guarded against; but it is much more difficult to feign accidental injury than industrial illness, and this is a type of abuse that can be prevented very largely by an efficient system of medical examinations. Death benefits should certainly be increased materially, and should be based upon the capitalized earning power of the deceased and the number and ages of his dependents.

If it should appear that increases in benefits such as are here suggested would bear too heavily upon industry, the answer is that one reason—and a most important one—for making the increase is to render industrial injuries so costly that they will not be tolerated. If 50 to 75 per cent of our industrial accidents can be prevented, as experts firmly believe, and if accident prevention lies within the province of the employer, as it clearly does, then it is high time to bring pressure to bear upon American business men so that they will cease to ignore this vital problem. Doubtless the best antidote for indifference is a heavy addition to the costs of operation of those employers who refuse to turn over a new leaf.⁸

Rehabilitation of the Injured. "Prevention, compensation, and rehabilitation" is the battle cry of those who are warring against industrial

⁸ An increase in benefits, of the type here outlined and for the purposes set forth, is strongly advocated by Professor Bowers.

accidents. Prevention, of course, would be the best of all possible solutions of the problem. But complete prevention is apparently unattainable, and in its absence there is sore need for compensation and rehabilitation. Of prevention and compensation we have already said enough, but we must not close our discussion without some reference to the possibilities of industrial rehabilitation.

It is socially desirable that the victims of industrial accidents be accorded such treatment as will enable them to resume productive work promptly. In many instances, however, a complete recovery does not mean that the worker is ready for a job, for the seriousness of the injury may preclude the possibility of a return to the old occupation. The loss of a hand, an arm, or an eye may completely incapacitate a worker so far as the performance of his former duties is concerned. Rehabilitation is defined by law as "the rendering of a physically handicapped person fit to engage in a remunerative occupation." The great need for assistance of this kind is indicated by an estimate of the director of the Federal Board for Vocational Education to the effect that there are some 200,000 persons permanently disabled in the United States annually. Some of these are hopelessly crippled and cannot work again, some are able to resume their old jobs fairly soon, and still others—estimated at some 55,000 persons—need help in getting into employment by means of which they can support themselves. But the number of those actually rehabilitated is only about 10,000 a year.

The work of rehabilitation is carried on by the states in cooperation with the federal government, by authority of the Civilian Vocational Rehabilitation Act of 1920. The states are granted federal aid on the basis of population, each state supplying from its treasury an amount equal to that provided by the federal government, and the task of training workers for new occupations is carried on under the direction of the Federal Board for Vocational Education. Mr. J. C. Wright, former director of the Board, has outlined the work of rehabilitation as consisting of (1) locating the persons who need training, (2) advising with them about the kinds of jobs in which they would be happy and for which they are fitted, (3) training them for the selected jobs, (4) finding openings for them in industrial plants, and (5) following up the cases for six months to two years to make sure that the rehabilitation has been satisfactorily completed. Strangely enough, those who need rehabilitation often have to be urged to accept the assistance which is available without cost. This fact probably accounts in large measure for the limited effectiveness of the work, which at present is reaching only about 20 per cent of those who need aid of this kind. Rehabilitation work will doubtless increase in popularity when it becomes more widely known that most of the men and women who have been rehabilitated are able to earn more after than before they were disabled. The federal Social Security Act recognized

the importance of this work by increasing by approximately two million dollars a year (beginning in 1938) the federal appropriations to be used for purposes of rehabilitation of the disabled.

SICKNESS

Sickness is very similar to unemployment and industrial injury in its economic consequences. The man who is without work from any of these three causes is likewise without income and, unless some system of aid has been provided, may gradually sink to the depths of poverty. In an economic sense, sickness and injury are even more serious than unemployment, since they add the burden of medical costs to the worker's regular expenses of maintenance.

The Extent and Cost of Sickness. Our information on the extent of sickness in the United States, like most of our information on conditions of social welfare, is extremely meager. Here again, as in so many instances, we have to fall back upon estimates. But if these estimates come anywhere near the truth, we can no longer afford to ignore this phase of the problem of economic insecurity. The National Health Survey of the United States Public Health Service estimated, from data collected in 1935-36, that "6,000,000 people in the United States are unable to work, attend school, or pursue other activities each day during the winter months on account of illness, injury, or gross physical impairment resulting from disease or illness," that there are 22,000,000 illnesses disabling individuals annually for a week or longer, and that "close to $1\frac{1}{4}$ billion days are lost annually from work at home or in industry, and from school, through illness disabling for one week or longer."⁹ Professor Abraham Epstein, who has written extensively on the subject, says that "from 2,500,000 to 3,000,000 persons are ill in the United States every day."¹⁰ Dr. Dublin believes that the total loss in current production runs to more than \$1,250,000,000 per year, and that another billion dollars must be added to cover medical costs. We may note, finally, the estimate of the Metropolitan Life Insurance Company (made public on December 3, 1947) that the common cold alone annually costs the American people \$400,000,000 for medical treatment; \$420,000,000 in lost wages; 60,000,000 work days lost to industry; and 1,500,000,000 days of discomfort and reduced efficiency.

The Need for Public Action. In view of these terrific economic losses, not to mention the human suffering involved in such widespread sickness, it is surprising that we have done so little in this country to remedy the situation. We have had, to be sure, anti-spitting laws and anti-tuberculosis

⁹ *An Estimate of the Amount of Disabling Illness in the Country as a Whole*, Washington, United States Public Health Service, Preliminary Reports, Bulletin No. 1, 1938, pp. 1-3.

¹⁰ Abraham Epstein, "Health Insurance—the Next Step," in *The New Republic*, February 17, 1937, p. 35.

campaigns; health pamphlets issued by insurance companies and health hints written by newspaper columnists; a limited number of public clinics for the poverty-stricken, and free medical service for the employees of a few progressive firms; sick benefits through trade unions, and health insurance provided by a handful of employers. But our attempts to safeguard the average citizen against ill health, and to indemnify him for economic loss when sickness lays hold upon him, have been, on the whole, quite haphazard.

There can be little doubt that our tradition of individualism has been a serious obstacle to the development of a program of health conservation and insurance in the United States. Custom has decreed that whoever can pay must meet his own doctor bills, and, in the absence of ability to pay, either the pride of the needy or the unwillingness of doctors to work without pay has often stood in the way of sick persons getting much-needed medical attention. "Caught between two millstones—loss of wages and unbearably heavy sickness costs—the sick American wage earner first tries to get along with as little medical care as possible. When this can no longer be done, his alternative is private or public charitable medical relief. A compilation of sickness surveys in twelve communities in the United States, made by Dr. Michael M. Davis, disclosed that from 25 to 30 per cent of the relatively serious cases of sickness had no physician's care. In the rich city of Rochester, New York, 39 per cent of the persons suffering from disabling illness had no doctor in attendance. The Committee on the Cost of Medical Care concluded: 'Each year nearly one-half of the individuals in the lowest income group receive no professional medical care or dental attention of any kind, curative or preventive.'"¹¹

Cooperative Health Service. In comparatively recent years, an attempt has been made to provide relief through the agency of cooperative systems of health service, enabling a family to provide for its medical needs by paying a stated sum over a specified period of time, say a year. For quite a while, the officials of the American Medical Association were outspoken in their opposition to schemes of this kind, apparently wishing to keep their business relationships with their patients on an individual basis, and to charge for each item of service rendered rather than to make a set annual charge. However, there has been increasing insistence, on the part of both physicians and the public, upon the expansion of cooperative health service. The American Institute of Public Opinion made a survey in 1938, which showed that seven out of ten doctors favored the adoption of a plan which, through regular payments to a health fund, would assure necessary medical and hospital care to an individual or family; and that 53 per cent of the population were willing to pay a satisfactory charge—

¹¹ *Ibid.*, p. 35.

say, \$2.00 a month per person—in order to be certain of having complete medical and hospital care when it was needed.¹²

Another survey, made public in November, 1944, showed that 82 per cent of the persons polled thought that “something should be done to make it easier for people to get medical care when they need it”; and that “68 per cent of the American people favor extending social security to cover doctor and hospital care, while 67 per cent would be willing to pay \$3.00 a month if assured complete doctor and hospital care for themselves and their families anytime in the future.”¹³ Just a year later, President Truman addressed a message to Congress, asking that legislation be passed to establish, among other things, a program for the prepayment (through social security contributions) of medical costs, including medical, dental, hospital, nursing, and laboratory service; and declaring that “by preventing illness, by assuring access to needed community and personal health services, by promoting medical research, and by protecting our people against the loss caused by sickness, we shall strengthen our national health, our national defence, and our national productivity. We shall increase the professional and economic opportunities of our physicians, dentists, and nurses. We shall increase the effectiveness of our hospitals and public health agencies. We shall bring new security to our people.”¹⁴

The Case for Socialized Medicine. Though cooperative health service would be a great advance over the situation that exists today, and would mean better health and longer life for many, it seems evident that many millions of our poorer citizens could not pay even the modest charge proposed in most plans of this kind. For those in the lowest income groups, adequate medical attention seems to be out of the question unless it is provided without any charge whatsoever. The advocates of socialized medicine argue that, since the public health is scarcely to be regarded as less important than general education, there is no good reason for not socializing our health service as we have socialized our grade-school and high-school education, providing medical advice and treatment and free hospitalization for all who need them, at the expense of the state. They even insist that, far from being a costly piece of social engineering, a health program of this sort would be a great money-saving venture, cutting down materially the loss in total national income which we now suffer because of sickness. That such a program, properly carried out, would reduce the death toll is indicated by the statement of Dr. Russell L. Cecil, of the Medical Society of New York State, to the effect that “25,000 to 30,000 lives might be saved annually in this country if inexpensive or free pneumonia serum were generally and quickly available.”

¹² *The New York Times*, June 15, 1938.

¹³ *Ibid.*, November 19, 1944.

¹⁴ *Ibid.*, November 20, 1945.

In March, 1946, the Labor Government of Britain introduced into Parliament a national health program which proposed that government-financed medical and dental care be given to "all the 40,000,000 people in England and Wales." This bill provided for the public ownership of all hospitals except those giving instruction to doctors, and free hospitalization for all patients who need it; the establishment of new public health centers for hospital, clinical, dental, and specialist services, with free treatment and medicine; and eye examinations and the provision of glasses at no cost.¹⁵ This program, which is scheduled to go into effect in 1948, is quite definitely *socialized medicine* (since it will provide for the needs of *all* citizens without payment), in contrast to the plan proposed for the United States by President Truman, who repeatedly stated that he was proposing *not* socialized medicine, but a program which would be paid for "through expansion of our existing compulsory social insurance system." The cost of the British program, estimated at \$608,000,000 annually, will be shared by national and local governments in the ratio of about five to one. However, the national government's payment will come out of the national social security fund, so that the plan, in its financial aspects, is not strikingly different from President Truman's. It may be added that in Britain "all patients will be free to choose their own doctors, even their family doctors if [the latter] join the service; or, if they prefer to pay, there will be no ban on private practitioners and they can go on as before."¹⁶ Reports from England are to the effect that "the bill, in its general outlines, has received universal approval, since the Conservatives and Laborites alike agree on the principle of comprehensive medical services free to everyone."¹⁶

Wage Payments During Illness. Leaving, now, the question of whether medical and hospital care are to be provided individually, cooperatively, or socially, we shall examine briefly the problem of indemnifying the workers for the loss of income resulting from the inability to perform their daily tasks. There has been much argument as to whether this should be done at all, and if so, to what extent and at whose expense. An examination of the situation seems to indicate that sickness benefits should and must be paid to ailing workers, if we are to have a system of health preservation worthy of the name. Industrial workers usually feel that they cannot afford to quit their jobs on account of illness as long as they are able to keep going. As a consequence, we have many workers in our stores, offices, and factories who should be at home under a physician's care; and the result is that common colds, influenza, and other diseases take a far heavier toll than need be.

Until we make it easy for the sick worker to stay in bed, we have not adequately protected those who will have to work with him and ride

¹⁵ Philadelphia *Evening Bulletin*, March 22, 1946.

¹⁶ *The New York Times*, March 22, 1946.

beside him in crowded street cars if he tries to carry on. We believe, therefore, that a sound public health program must include provision for the payment of sickness benefits that will permit workers to get rest and treatment in the early stages of their illness. The possibility of malingering must not be allowed to interfere with this essential feature of health conservation, for there are ways of guarding against it, and even at its worst it is far less expensive than epidemics. President Truman's proposal for health service recognized the need for provision against the loss of wages through sickness and disability, in these words: "A comprehensive health program must include the payment of benefits to replace at least part of the earnings that are lost during the period of sickness and long-term disability. This protection can be readily and conveniently provided through expansion of our present social insurance system, with appropriate adjustment of premiums."¹⁷

Who Shall Pay the Bill? Many persons will consider it entirely fitting and proper for the worker to contribute to the health insurance fund, but some may object to the employer being taxed (as he would be under the Truman plan) for this purpose. So far as the inability to work is caused by occupational disease, the employer can rightly be charged with being largely responsible for the loss of time, just as in the case of industrial injuries; but only a part, and probably a minor part, of the illness of workers is attributable to the neglect of employers to provide sanitary working conditions. If the employer's contribution to health insurance requires justification, it is doubtless best to place it on the ground of social expediency. Since the worker is to pay something, the most convenient and least expensive method of collection is to have the employer hold back a specified amount of his wages. But since the worker cannot afford to meet the whole expense, it is expedient from the social point of view to let the employer also make a contribution. In most instances at least, this contribution will enter into the costs of production, and therefore into the selling price. In this way the employer will usually find it possible to shift the burden of health insurance to the ultimate consumers of his product. It should be observed that President Truman's message to Congress implied that a part of the expense might have to be met from general revenues.

Health insurance, it may be said once more, must be *compulsory* if it is to benefit those who need it most. With workers interpreting too literally the Biblical precept, "Take no thought for the morrow," and with employers none too willing to assume social responsibilities that involve money payments, it will not do to entrust so vital a measure as health insurance to the vagaries of voluntary acceptance. Its adoption, like that of workmen's compensation and other forms of social insurance, must be enforced by the state.

¹⁷*Ibid.*, November 20, 1945.

OLD AGE

For the worker who escapes or manages to survive unemployment, industrial injury, and loss of time through sickness, old age lies in wait at the end of the trail. How ill equipped the average worker is to cope with this last great bearer of economic insecurity may be judged by reference to the figures we have already given relating to average yearly wages and minimum yearly expenditures in the United States. The prospect of living to a ripe old age is not so alluring when it is realized that two out of every three persons who attain the age of sixty-five in this country are from that time forth dependent upon others for support.

The Extent of Old Age Dependency. It is estimated by the National Industrial Conference Board that 6.9 per cent of the population of the United States, or nearly 10,000,000 persons, were sixty-five years of age or over in 1940, and that the percentage will be 10.2 by 1970.¹⁸ About two-thirds of these persons are dependent upon public, private, or family aid. Nearly 70 per cent rely upon their children or other relatives for support, the others being cared for through private and public relief, in and out of institutions.

"Old Age" in Middle Life. In referring to persons sixty-five years of age and over, we have not meant to imply that this is necessarily the point at which old age sets in. The ability to render useful service is not restricted to youth and middle age. The old saying that a man is as young as he feels has much truth in it, for we can find abundant examples of men who remain young at seventy-five and others who are worn out at forty. Many persons are self-supporting long after they have reached sixty-five; but it is unquestionably true that, as the years accumulate, the average worker finds it increasingly difficult to secure and hold a remunerative job.

The situation has become particularly acute of recent years, for there has developed, on the part of business enterprisers, a growing reluctance to take on new workers who are more than forty or forty-five years of age. Indeed, it is the policy of some concerns to limit the hiring age to thirty-five years in the case of unskilled labor. Our census figures show that in agriculture, in small businesses, in professions, and in public service, this discrimination against the older workers has not been exercised extensively, but in the great extractive and manufacturing industries the age limit has undoubtedly been declining steadily. "At the Highland Park Plant of the Ford Company," wrote Dr. Harry W. Laidler some years ago, "about three-fourths of the men were found to be under forty. It is practically impossible for a man over forty to get a job there, while men who have reached that age find difficulty in holding their jobs. In

¹⁸ *The Economic Almanac, 1945-46*, New York, National Industrial Conference Board, 1945, p. 1.

a recent investigation in certain steel mills, it was found that the average age of the steel workers was not far from thirty." The adoption of specific age limits is usually attributed to the lower wages of younger workers; their greater speed, endurance, and adaptability; the higher cost of group insurance when older workers are included; the adoption of non-contributory pension systems; and the cost of workmen's compensation. (Of course, the manpower shortage of World War II changed this situation temporarily.)

Despite the current practice of turning workers loose at an age that used to be thought the prime of life, the measures that have been taken to care for old age dependency have seldom provided for payments before sixty-five in the case of men, and sixty in the case of women. These were found to be the usual ages of retirement in a study of industrial pensions conducted by the National Industrial Conference Board.¹⁹ This means in reality that those able to hold their jobs until they attained the ages mentioned would then begin to draw pensions, other workers being dismissed in the meantime as they appeared to their employers to be liabilities rather than assets. The public pension systems thus far inaugurated in the United States stipulate that payments shall not begin before the age of sixty-five, and in some instances not until the dependent has reached seventy years of age. If industrial workers are to be "scrapped" at forty, forty-five, or fifty, a pension that does not provide payments before sixty-five is clearly deficient. Unless the present tendency to discriminate against the older workers is checked, it will be necessary to revise our working concept of old age, and to define it as that age at which a worker is no longer wanted by industry and is therefore unable to secure even reasonably steady employment.

Savings as Security Against Old Age. It is hard to dislodge from the minds of successful business men the notion that whoever is industrious, sober, and thrifty can himself provide against the various forms of economic insecurity. "When businessmen think of security for their businesses against the day of misfortune, they think in terms of surpluses," said a former president of the National Association of Manufacturers in a public speech. "The building up of corporate surpluses . . . is generally recognized as not only a sound principle of business, but a saving principle, and I see no reason why it is not as applicable and essential to the economic program of an individual as to that of a corporation. I cannot conceive of security of enduring character apart from the practice of thrift and energetic exercise of individual responsibility."²⁰ This cheerful philosophy assumes that there are times in the life of every man when

¹⁹ *Elements of Industrial Pension Plans*, New York, National Industrial Conference Board, 1931, p. 20.

²⁰ John E. Edgerton, "Principles of Economic Security," in *Annals of the American Academy of Political and Social Science*, March, 1931, p. 76.

his income is greater than his necessary expenses: otherwise, he would experience considerable difficulty accumulating a surplus. But studies of wages and family budgets show the weakness of this fundamental assumption. If, as we have seen, the *average* wage in the United States is barely large enough to buy a "comfort" standard of living, it is idle to talk of setting aside surpluses to meet the emergencies of unemployment, accident, sickness, and old age.

We are not here suggesting that it is impossible for any wage earners to save. The two and a half billion dollars in the "thrift accounts" of the Postal Savings System are evidence to the contrary. The unknown volume of workmen's deposits in savings accounts is further proof that very modest surpluses can be, and are, built up, at least temporarily, by the more fortunate wage earners. But the futility of asking wage earners in general to guard against economic insecurity by adopting the corporation plan of accumulating surpluses "out of their earnings during the days of profitable operation" becomes apparent when we recall that at times one-third of the wage earners in the United States receive only from \$500 to \$1000 a year each, while the incomes of another third range between \$1000 and \$1500.²¹

Trade Union and Industrial Pensions. Trade unions and individual business concerns have done something to relieve old age dependency by arranging to pension their members and employees, respectively. According to officials of the American Federation of Labor, nine international unions and six local unions are paying \$4,000,000 a year to about 11,500 pensioners. Figures from the United States Pauper Census indicate that 80,000 persons are receiving industrial pensions, with total payments estimated at from \$50,000,000 to \$60,000,000 annually. Through these two types of relief, therefore, about 90,000 dependents receive aid, amounting on the average to \$350 a year for the trade unionists, and from \$625 to \$750 annually for the industrial pensioners.

Pensions for Public Employees. A much larger number of old age dependents are taken care of under the pension systems provided for certain employees of the federal, state, and municipal governments. Civil service employees of the United States government contribute 5 per cent of their basic salaries to a pension fund from which, at the age of sixty-two, they draw annual benefits that may go as high as \$1200 or even higher. They are also protected against total disability prior to the age of retirement. In 1944, payments to the amount of approximately \$86,000,000 were made to some 85,000 federal civil service pensioners; and

²¹ In 1945, a year of huge production in the United States, 20 per cent of American families had total incomes of less than \$1000 each, 27 per cent of the family incomes ranged from \$1000 to \$2000, and 23 per cent from \$2000 to \$3000. (*Report for the Business Executive*, July 25, 1946, p. 4.)

\$138,000,000 was paid in benefits to 164,000 retired workers under the provisions of the Railroad Retirement Act.

Public-school teachers form the largest group of state and municipal servants now enjoying retirement privileges, though pensions have also been provided by these governmental units for certain other classes of workers. It is estimated that more than 800,000 public-school teachers come under the protection of state or municipal pension systems, and almost as many state and local employees of other types have protection under pension plans. Other pensioners in the field of public or semi-public service are war veterans, in certain classifications, to whom payments are made by the United States government; college teachers, who come under the retirement provisions of the Carnegie Foundation, or the annuity system of the Teachers' Insurance and Annuity Association; and superannuated preachers and their dependents, who are provided for by the church boards of the several denominations.

The Case for Industrial Pensions. The scattered data presented here are unsatisfactory in many respects, but they serve at least to show that federal, state, and municipal governments have recognized more fully than business enterprisers an obligation toward employees who are no longer capable of earning a living. This does not mean that employers are oblivious to the merits of industrial pensions, or that they have done nothing toward putting pension plans into operation. We have noted the fact that 80,000 retired workers are now drawing industrial pensions; and it has been estimated by Mr. A. D. Cloud, an authority on the subject, that probably 5,000,000 workers are covered by *formal* pension systems of the United States, besides those coming under *informal* plans. It seems probable, then, that some 20 per cent of all persons gainfully employed in industry are in some measure protected against old age dependency by the prospect of receiving pensions. But the protection is not complete, since only 30 per cent of the pension systems are *contractual*, comprising definite obligations to the performance of which the employer is legally bound. In many cases, whatever "rights" the worker may have are those of a *pensioner* and not of an *employee*. Usually the employer attempts to word the agreement in such manner that he is unhampered in granting or denying a pension, the worker being uncertain whether he will receive any benefits from the system until he is actually placed on the pension list. However, the employer's "disclaimer" is often declared invalid in the event of litigation.

There is no reason to suppose that many employers would fail to live up to the spirit of any pension system which they had voluntarily adopted. Indeed, the payment of pensions is coming to be regarded by our largest industries as a business proposition, and not an act of philanthropy. There has until recently been no legal obligation to adopt a pension system for superannuated workers, but the truth is that these aged workers have

been recognized by enlightened concerns as "drags upon production," and many enterprisers have believed it too costly to keep them at their accustomed tasks. Of course they might have been discharged, but the thought of "firing" employees who have grown old in service is repugnant to most employers, and, moreover, this sort of practice tends to break the morale of those who remain. But many concrete advantages accrue to the employer who adopts a pension system, not the least of which is a reduction in labor turnover. It is probable, indeed, that a pension plan *can* pay for itself by increasing the continuity of service.

The Need for Compulsory Pensions. Despite the benefits that a business enjoys through the operation of an industrial pension plan, the adoption or rejection of a pension system cannot safely be left to the individual enterpriser. In this, as in all types of social insurance, compulsion is an essential feature; for if the proposed measure for relief is put on a voluntary basis, there will inevitably be unprogressive employers who will ignore it completely. This lesson was long since learned by the nations of Europe, to whom social insurance of various kinds is now an old story. No important country has voluntary old age insurance today; but there are at least twenty-five countries operating under compulsory systems, with pensions paid from general funds to which employers and employees, and sometimes the state as well, contribute.

Old Age Annuities Under the Social Security Act of 1935. The Social Security Act (as amended in August, 1939) provides for a system of annuities to be paid to workers over sixty-five years of age who have aided in building up a fund by making periodic payments in their earlier years. It also provides payments for certain dependents and survivors of such workers. The basic annuity plan consists of a contractual arrangement between the federal government and the worker who contributes to the fund. The annuity which the worker receives in his old age is his by right and not by grant. It is his regardless of whether he has or has not other sources of income; and it is his to spend, save, or give away, as he may choose.

This annuity scheme is a federal and not a state plan, and applies to all workers in certain trades throughout the United States. It is financed by taxes or contributions made by both employers and employees, dating from January 1, 1937. This annuity plan, like the unemployment insurance arrangement provided under the Social Security Act, does not apply to agricultural workers, domestic servants in private homes, officers and crews engaged in shipping in the United States waters, and employees of non-profit-making organizations. Individual enterprisers, such as self-employed farmers, professional men, and small shopkeepers, are not covered by the plan; nor are the 24,000,000 housewives or the millions of others who do not rate as "gainful workers." Business concerns that have had their own private pension systems in the past have in many cases

coordinated them with the terms of the Social Security Act, instead of abandoning the private plans. Indeed, the number of private pension plans has *increased* since 1935. By January, 1947, 1,324,496 persons were drawing old age or survivor benefits, and the Social Security Board estimates that between $3\frac{1}{2}$ and 5 million aged men and women will be receiving these kinds of monthly benefits by 1960. The total amount of such payments in the year 1946 was \$329,156,700. About 35 million persons are now making contributions which will eventually lead to the receipt of old age or survivor benefits under the provisions of the Social Security Act.

Both employers and employees were required to contribute to the annuity fund 1 per cent of the first \$3000 of wages or salaries received from 1937 to 1942, inclusive, with increases in this percentage from 1943 to 1949, when the tax will have reached 3 per cent each for employer and employee,²² or a total of 6 per cent of the taxable portion of the latter's earnings. As in the case of unemployment insurance, the payments made by both employers and employees will doubtless be shifted, in large part, to the ultimate consumer, appearing in the form of higher prices. Up to this time, the receipts have been considerably greater than the disbursements, so that the Federal Old-Age and Survivors Insurance Trust Fund, as it is called, now amounts to \$6,615,000,000. But later the disbursements may exceed the receipts, so that the Trust Fund may eventually be exhausted, making it necessary to finance benefit payments in part from current taxation.

The benefit payments received by the workers vary from \$10 to \$85 a month, depending upon the amount of the individual worker's average monthly wage up to \$250 a month. The basis of calculation is the worker's "primary benefit," which is found by taking 40 per cent of the first \$50 of his average monthly wage, adding 10 per cent of the balance up to \$250, and then adding 1 per cent of this sum for each year since 1937 (when the law became effective) in which he received \$200 or more in wages. Let us take the case of a worker in a covered occupation, whose average monthly wage since 1937 has been \$200 and who reached the age of sixty-five in 1947. His primary benefit—the amount of his monthly old age benefit—is computed as follows: Forty per cent of \$50, or \$20; plus 10 per cent of \$150, or \$15; plus 1 per cent of the total, \$35, for each of ten years, or \$3.50; giving this worker after 1947 a total benefit of \$38.50 a month, which he will receive as long as he lives. The payment of benefits began in 1940 for insured workers who reached the age of sixty-five in that year.

Payments for Workers' Dependents and Survivors. Under the 1939 amendment of the Social Security Act, provision was made for monthly

²² The tax was actually "frozen" at 1 per cent in 1943, instead of being raised as originally planned, and was still set at that figure in 1947.

payments to certain dependents of the retired worker or for specified survivors upon his death. These payments are based on the worker's primary benefit, which is the *personal* annuity he receives regardless of any family responsibilities he may have. However, if he is married, his wife (if she is sixty-five years of age) is entitled to an additional payment amounting to one-half the primary benefit; and each child under sixteen (or under eighteen, if in school) is granted a similar payment. This would mean, for the hypothetical worker whose primary benefit was calculated in the preceding paragraph, a total family income of \$57.75 for himself and wife of sixty-five or over; or a total of \$77.00 if they had a child of seventeen or eighteen still attending school. But it would not mean \$96.25 if they had two such children; for the law limits a family income to twice the amount of the primary benefit, or 80 per cent of the worker's average monthly wage, or \$85.00, whichever is the smaller.

The payment for dependent children ends at age eighteen, but the wife's payment continues as long as she and her husband both live. If she survives him, her payment is increased 50 per cent—that is, it becomes three-fourths of the primary benefit instead of only one-half. If a worker's wife is under sixty-five at the time of his retirement, she does not draw benefits until she reaches that age; she then receives one-half the primary benefit if her husband is living, and three-fourths if he has died. A type of benefit known as "widow's current" is available for the widow (regardless of her age) of any deceased insured worker who has in her care a child or children of her deceased husband, and who also meets certain other requirements. Dependent parents of sixty-five who outlive a worker are entitled to survivors' payments if the insured has left no widow or young child. The benefit in this case is one-half the primary benefit for each dependent parent.

In December, 1946, the average monthly benefit paid to retired workers was \$24.60; to wives of retired workers, \$13.00; to children, \$12.55; to aged widows, \$20.20; to widows with a child or children (widow's current), \$20.10; and to dependent parents, \$13.15.

Federal-State Old Age Assistance. This system of compulsory annuities relieves many of our workers of the fear of a wholly penniless old age. It leaves but meagerly protected, however, those workers whose average monthly incomes have been very low; and overlooks entirely, as we have seen, the workers in many occupations whose daily tasks do not bring them under the provisions of the Social Security Act. Such persons are entitled to support in their declining years, as we have acknowledged through the maintenance of almshouses or poorhouses, which now, happily, are giving way to more humane and less costly methods of caring for the aged.

For a good many years, prior to 1935, about a dozen of our states provided old age pensions for their citizens. These payments were not

annuities, such as we have described in the preceding section, but allowances for old persons with no other source of income. In general, the age at which payments began was sixty-five to seventy; the *maximum* allowances of the several states ran from \$250 to \$360 a year; and there were residence requirements ranging from one to fifteen years of residence in the country, and from ten to fifteen years in the state.

In an attempt to extend old age assistance to the destitute aged throughout the country, the framers of the Social Security Act of 1935 included in its provisions the payment by the federal government of one-half of payments made by any state to its needy aged, up to the total of \$30 a month, or a maximum contribution of \$15 a month by the federal government per individual; and the amendment to this Act in 1939 raised the maximum federal contribution to \$20. This means at least some assistance to the indigent aged in the states which accept the terms offered by this section of the Act, and all the states have done so. However, the needy do not always receive as much as \$40 a month, for some states have decided upon smaller maximum allowances. The grants in 1945 varied from a high of \$47.42 in California to a low of \$11.58 in Kentucky, with an average of \$30.69 for the country as a whole. In 1946, approximately two million persons were paid some \$800,000,000 in old age assistance of this kind.

These payments are clearly in the nature of charity, being paid avowedly to destitute persons only, who are required to prove that they have no other source of income. This seems to us to be a disadvantage. We believe that federal provision should be made for either an annuity or an old age allowance for every person of sixty-five or over, whose total income from other sources does not exceed a stated amount, say \$400 a year. We propose, in other words, that everyone in the country shall enjoy the protection of a guaranteed old age income. The aged person would collect, then, from the annuity plan to which he has contributed, or from the old age assistance plan, but not from both. The public allowance for those without annuity provision should be of such size as to insure at least a minimum of comfortable subsistence, and should vary with changes in the price level. We believe that dependence upon old age provision of this kind should not involve a loss of self-respect on the part of the recipients, and we see no reason for any greater stigma attaching to the acceptance of an industrial annuity or public allowance than now attaches to the acceptance of free public school training or police protection.

We referred, a little while back, to the costliness of caring for dependents in almshouses and similar institutions. Old age assistance is more economical, largely because the operation of poorhouses entails very high costs of administration, sometimes amounting to more than 50 per cent of the total appropriations for these institutions. After eight months' experience with old age assistance in Pennsylvania, the commission in charge reported

that the total cost of the system in that state would not exceed \$5,000,000, and added that for that sum "we would be able to take care of more than three times the number of people now supported in our almshouses, upon which institutions we are now making an annual cash expenditure of approximately \$6,000,000." Through the adoption of a comprehensive system of old age assistance we have the opportunity not only to repay a debt, long since overdue, to the aged men and women whose labors have swelled the incomes of the well-to-do, but also to handle humanely and economically a problem which has been dealt with largely in a barbarous and wasteful fashion.

Further Federal-State Aid to the Needy. The amended Social Security Act has provided for further assistance for the needy. Blind persons who cannot support themselves are cared for under a program which is very similar to the federal-state old age assistance plan that we have described. The federal government contributes as much as the state toward the benefit payment of each blind dependent, with a maximum of \$20 a month for the federal half of the total benefit. Benefits of this kind to the blind amounted in 1944 to \$25,000,000. The government also makes contributions equal to those of the state, to be used in caring for needy children who are living with a parent or other close relative. The maximum total payment is \$18 a month for the first dependent child, and \$12 a month each for additional dependent children in the same house. Of these amounts, the federal government pays \$9 and \$6, respectively. In 1944, payments for dependent children amounted to \$135,000,000.

Conclusion. The limitations of space have made it impossible for us to give to the problem of economic insecurity the thorough examination which, by virtue of its social consequences, it deserves. We have looked into the matter sufficiently, however, to understand that the problem consists of maladjustments over which the worker has no control—maladjustments which, nevertheless, cut off his income and thus deprive him of purchasing power that he must somehow secure if he and his dependents are to have the necessities of life.

We have proposed that whatever aid is required shall be provided, either directly or indirectly, by the community of which the worker is a member. In this country, the "community" will in some cases be the state and in other cases the nation. The means by which aid may best be rendered appears to be social insurance of appropriate types. We believe that premiums covering insurance for unemployment, industrial accidents, sickness, and old age are legitimate costs of production, so far as these forms of maladjustment are unavoidable. The consuming public should expect to pay, and be willing to pay, prices that include these necessary costs; and it is inevitable that, in the long run, irreducible costs for social insurance will enter into the selling price of any good into the competitive production of which labor protected by compulsory social insurance has

entered. Consequently, such insurance will not, in a given industry, impose a burden upon those concerns which succeed in reducing unemployment to a minimum, safeguarding their employees against accidents and sickness, and so conserving the strength and skill of their workers as to make it unnecessary to pension employees until they have reached an advanced age. It is only those firms that fail to duplicate the performance of such socially-minded concerns that, by reason of high insurance premiums, will be forced to bear any part of the burden of social insurance; and, as we have suggested, this penalty of high costs will provide the incentive to lessen the maladjustments that give rise to these high costs.

It is probable that there will always be some members of society who, because of physical or mental defects, cannot be expected to support themselves. Unfortunates of these kinds will have to be cared for at the public expense, unless they have friends or relatives who are able to look after them adequately. But as for the great mass of industrial workers who are anxious to be self-supporting, we believe that, in general, it is both fair and feasible that the industries with which the workers ally themselves should be made responsible for providing economic security. Once a worker has attached himself to an industry, this industry should be made to contribute to a fund from which he will receive an income when he is not working, just so long as his idleness is not voluntary. In times of unemployment, he should receive unemployment benefits; if incapacitated by accident or sickness, he should have "compensation" or "sick pay"; and when, by reason of the infirmities of old age, he is no longer able to perform his daily tasks, he should have either an annuity or old age assistance provided by the state.

Ordinarily, the cost of industrial security may properly be levied against the industry that is involved, but in certain instances, as we have already suggested, it may be better for the state or federal government to make the payments directly to those entitled to them, from funds collected through steeply graduated taxation. In either case, we believe that the community should definitely accept the responsibility for providing, directly or indirectly, a substantial income to all members of society who are willing to work but who, because of circumstances wholly beyond their control, are unable to command the purchasing power needed to buy the necessities of life.

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1. It is said that confusion in the use of the words "accident" and "injury" leads us to give less attention to *accidents of all kinds* than they deserve. Explain.
 2. Distinguish carefully between "direct" and "indirect" costs of injuries, and give some idea of the relative monetary significance of the two.

3. It has long been believed that most industrial injuries are caused by the failure to provide safe physical conditions of work. Argue that this belief is or is not sound.
4. How might the cause of accident prevention be advanced through modifications of the benefits paid to injured workmen under the provisions of the workmen's compensation laws?
5. "It would pay society in dollars and cents to provide free medical and hospital service for all who need it, and to require employers to pay sick benefits to ailing workers." Examine critically the facts upon which this statement is based, and decide whether they are or are not adequate. In other words, determine whether the above conclusion is warranted by the facts that are presented.
6. What is the attitude of the medical profession in general toward socialized medicine?
7. "Sickness benefits should and must be paid to ailing workers." Argue pro and con.
8. What relationship, if any, do you see between "*old age*" in *middle life* and *technological unemployment*?
9. To what extent does dependent old age exist in the United States at the present time, and what measures have been taken to care for the destitute?
10. Discuss the possibility of handling the problem of old age maintenance by means of savings accumulated during working years.
11. The champions of social insurance usually insist that it must be of the *compulsory* and not of the *voluntary* type. What grounds are there for believing that voluntary social insurance would not meet the needs of the situation?
12. Outline the old age annuity program which was provided for in the amended Social Security Act.
13. Discuss the manner in which, under the Act, grants may be made to dependents or survivors of an insured worker.
14. In what respects does federal-state old age assistance differ from federal old age annuities? Why is it thought desirable to have two types of old age provision?
15. "Too much is being expected of government. Louder and louder the voice of the demagogue is sounding through our land, and bolder are becoming the forces of resistance to orderly procedure. The number of those who openly confess their communistic dreams is still relatively small, even though it has been growing in this season of discontent. . . . From such conditions and sources there naturally come, and will probably continue to come until the conditions have passed, proposals for public unemployment insurance and other schemes in the name of charity to subtract from private responsibility and add to that of the government."

In the light of this statement, criticize the proposals for social security that were made in the present chapter.

16. Unemployment, industrial injury, sickness, and old age have been dealt with as phases of the general problem of economic insecurity. What have these four items in common that makes it possible to consider them as parts of the one broad problem?

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Economic Inequality: Extent and Consequences

IN THE PRESENT CHAPTER AND THE ONE WHICH FOLLOWS, WE LOOK INTO THE distribution of the national income among individuals, families, and groups, with special reference to the problem of economic inequality.

The existence of inequality of this kind is apparent even to the least observant. In most instances, perhaps, this knowledge comes to a person through observing that his economic status does not compare favorably with that of certain other persons. Nearly every man is painfully aware, at one time or another, that his dwelling, his automobile, or his theater seats are inferior to those of some other members of society, and readily understands, in most instances, that the fault lies in the leanness of his purse—that is, in the inadequacy of his money income. Relatively few, however, realize the extent of inequalities in income in the great industrial nations, and still fewer give serious thought to the consequences of these inequalities, which gravely affect many phases of human life.

The truth is that economic inequality, as it exists in the United States today, means poverty for many in this land of plenty, and largely invalidates the American tradition of equality of opportunity. Inequality breeds inequality, and thus perpetuates a condition that keeps some persons from attaining the full development of their abilities, and from competing effectively with others of equal talents whom fortune has cast in happier rôles. The problem of economic inequality, as we see it, will be solved only when society has insured equality of opportunity for all its members, so far as this can be accomplished through the removal of artificial obstacles to the full development and utilization of personal capacities.

SOME DATA ON DISTRIBUTION OF INCOME

Statistics on the distribution of income in the United States, like so many kinds of economic statistics, are available only in fragmentary form. We shall have to manage with figures which, though admittedly unsatisfactory in some respects, serve nevertheless to indicate the major groups of incomes in this country, ranging from those too small to buy even a "health

and decency" standard of living to others so huge as to encourage the most extravagant spending. The most recent large-scale, detailed study of American incomes is the analysis made by the National Resources Committee of data gathered in a nation-wide survey of consumer purchases.¹ The "sample" covered some 300,000 families and a much smaller number of single men and women, and included incomes of all kinds. From these data, estimates were made of the incomes received, in the twelve-month period from July, 1935, to June, 1936, by the country's 29 million families of two or more persons and the 10 million single persons living alone or as lodgers.

These estimates, which are presented in Table 30, give a fair picture of the extent of economic inequality in a mid-depression year when production in this country was about 75 per cent as great as in the "normal" year of 1926. Though the amounts of income are different in "good" and "bad" years, the "distribution spread" is not radically different (as may be seen by comparing statistics for 1918, 1929, and 1935-36), and the existence of inequality would be apparent from the study of income figures for any year. If the reader should question the desirability of considering "families" and "single individuals" together, he will be interested in the Committee's comment in this connection: "Such treatment is justified by the lack of a sharp distinction between the two groups from the standpoint of the receipt and use of income. The diversity among the consumer units that make up the 29 million families is fully as great as that between families as a group and single individuals. An income of \$1000 a year means, to be sure, one thing to a single man or woman and another to an average family of four. But it also has quite different meanings to the family of two persons and to the family of eight. These two major groups of consumer units can therefore be combined, at each income level, to show . . . income distribution for the nation as a whole."²

¹ National Resources Committee, *Consumer Incomes in the United States: Their Distribution in 1935-36*, Washington, Government Printing Office, 1938.

A less fully detailed estimate of incomes in the United States, for the highly abnormal year of 1945 (*Report for the Business Executive*, July 25, 1946, p. 4), is given below:

INCOME DISTRIBUTION IN THE UNITED STATES, 1945

	No. of Families	Per Cent of Total	Income in Billions	Per Cent of Total Income
Under \$1000	9.2 millions	20	\$ 4.9	4
\$1000-\$2000	12.4	27	19.4	16
\$2000-\$3000	10.6	23	27.8	23
\$3000-\$4000	6.9	15	25.4	21
\$4000-\$5000	3.2	7	14.5	12
\$5000-\$7500	2.3	5	13.3	11
\$7500 and over	1.4	3	15.7	13
	46.0	100	\$121.0	100

² *Ibid.*, pp. 4, 5.

This study by the National Resources Committee indicates that the most prosperous 1 per cent of the income receivers got more than 13 per cent of the total income, the most prosperous 3 per cent got 21 per cent, and the most prosperous 10 per cent got more than 36 per cent. It shows, also, that 87 per cent of the income receivers in this

TABLE 30. DISTRIBUTION OF FAMILIES AND SINGLE INDIVIDUALS
AND OF AGGREGATE INCOME RECEIVED, BY INCOME LEVEL,
1935-36

(Source: *Study of Consumer Purchases*, Bureau of Home Economics)

Income Level	Families and Single Individuals			Aggregate Income		
	Number	Per Cent at Each Level	Cumu- lative Per Cent	Amount (in thousands)	Per Cent at Each Level	Cumu- lative Per Cent
Under \$250.....	2,123,534	5.38	5.38	\$ 294,138	0.50	0.50
\$250-\$500.....	4,587,377	11.63	17.01	1,767,363	2.98	3.48
\$500-\$750.....	5,771,960	14.63	31.64	3,615,653	6.10	9.58
\$750-\$1,000.....	5,876,078	14.90	46.54	5,129,506	8.65	18.23
\$1,000-\$1,250.....	4,990,995	12.65	59.19	5,589,111	9.42	27.65
\$1,250-\$1,500.....	3,743,428	9.49	68.68	5,109,112	8.62	36.27
\$1,500-\$1,750.....	2,889,904	7.32	76.00	4,660,793	7.87	44.14
\$1,750-\$2,000.....	2,296,022	5.82	81.82	4,214,203	7.11	51.25
\$2,000-\$2,250.....	1,704,535	4.32	86.14	3,602,861	6.08	57.33
\$2,250-\$2,500.....	1,254,076	3.18	89.32	2,968,932	5.01	62.34
\$2,500-\$3,000.....	1,475,474	3.74	93.06	4,004,774	6.76	69.10
\$3,000-\$3,500.....	851,919	2.16	95.22	2,735,487	4.62	73.72
\$3,500-\$4,000.....	502,159	1.27	96.49	1,863,384	3.14	76.86
\$4,000-\$4,500.....	286,053	.72	97.21	1,202,826	2.03	78.89
\$4,500-\$5,000.....	178,138	.45	97.66	841,766	1.42	80.31
\$5,000-\$7,500.....	380,266	.96	98.62	2,244,406	3.79	84.10
\$7,500-\$10,000....	215,642	.55	99.17	1,847,820	3.12	87.22
\$10,000-\$15,000....	152,682	.39	99.56	1,746,925	2.95	90.17
\$15,000-\$20,000....	67,923	.17	99.73	1,174,574	1.98	92.15
\$20,000-\$25,000....	39,825	.10	99.83	889,114	1.50	93.65
\$25,000-\$30,000....	25,583	.06	99.89	720,268	1.22	94.87
\$30,000-\$40,000....	17,959	.05	99.94	641,272	1.08	95.95
\$40,000-\$50,000....	8,340	.02	99.96	390,311	.66	96.61
\$50,000-\$100,000...	13,041	.03	99.99	908,485	1.53	98.14
\$100,000-\$250,000..	4,144	.01	100.00	539,006	.91	99.05
\$250,000-\$500,000..	916	"	.....	264,498	.45	99.50
\$500,000-\$1,000,000	240	"	.....	134,803	.23	99.73
\$1,000,000 and over	87	"	.....	157,237	.27	100.00
All levels.....	39,458,300	100.00	.....	\$59,258,628	100.00	.....

" Less than 0.005 of one per cent.

country in 1935-36 had incomes of less than \$2500 for the year, 65 per cent had incomes of less than \$1500, 42 per cent had less than \$1000, and 14 per cent less than \$500.

A further set of figures, to which we shall have occasion to refer in the next chapter, is given in Table 31.³ We see here that the larger the

TABLE 31. PERCENTAGE DISTRIBUTION OF TOTAL INCOMES IN INCOME TAX RETURNS FOR 1936, BY NET INCOME CLASSES, SHOWING DISTRIBUTION BETWEEN INCOMES FROM WAGES AND SALARIES AND FROM PROPERTY

(Source: United States Treasury Department, Bureau of Internal Revenue)

Net Income Classes (thousands of dollars)	Percentage from Wages and Salaries	Percentage from Property
Under 5 (estimated).....	70.22	29.78
5- 10.....	48.72	51.28
10- 25.....	36.37	63.63
25- 50.....	26.24	73.76
50- 100.....	19.29	80.71
100- 150.....	15.08	84.92
150- 300.....	9.97	90.03
300- 500.....	5.96	94.04
500-1000.....	2.36	97.64
1000 and over.....	1.09	98.91

income, the smaller is the proportion of the income that comes from wages and salaries, and the larger the proportion from property. For example, almost 49 per cent of the incomes ranging from \$5000 to \$10,000 a year are made up of wages and salaries, while slightly more than 1 per cent of the very largest incomes (1 million dollars and over) represent payment for personal services. Wages and salaries, then, form only a slight part of the incomes of the very wealthy, but are increasingly important as we move down the income scale, and comprise practically the whole income of the great mass of the gainfully employed. Returns from the ownership of property, on the other hand, are of almost no significance in the incomes of the "working classes," but provide more than one-half of the total incomes of all persons receiving \$5000 or more annually, and an overwhelming proportion of the incomes of the very wealthy. Thus we see that there are great inequalities in the distribution of *wealth*, as well as in the distribution of *income*. However, we should always bear in mind, when considering economic inequality, that our system of steeply graduated federal income taxes takes from those in the upper income brackets a large percentage of their total incomes, and our federal estate tax and state inheritance taxes do a good deal by way of redistributing huge accumulations of wealth, as is shown in Chapters 30 and 44.

³ *Statistical Abstract of the United States*, 1939, p. 188.

THE CONSEQUENCES OF ECONOMIC INEQUALITY

But of what significance are these inequalities in the distribution of income? Is there any evidence to show that they result in hardship or injustice? May they not, indeed, be beneficial rather than harmful to society? It is questions such as these that we shall now undertake to answer, by attempting to interpret economic inequality in terms of standards of living, economic security, educational opportunity, legal justice, and the control of government.

Economic Inequality and Standards of Living. In the present day and age, no one is likely to dispute the statement that there is a close relationship between money incomes and standards of living. Indeed, we may say that a man's standard of living consists of the total economic goods—commodities and services—that he can buy with his money income. The data on incomes that we have just examined show clearly that there are wide variations in incomes in this country, and it is quite apparent that standards of living in the United States and other countries vary almost as greatly as incomes. It is a far cry from the scanty diet of the poor to the overloaded tables of the rich, from the thin soles and threadbare clothing of the many to the fur coats and diamonds of the few, from the dingy rooms of most of our wage earners to the palatial residences of our multimillionaires. It is small wonder that we find pale, scrawny children on the East Side of New York, and ruddy, plump boys and girls on suburban estates. We are speaking here of great extremes, to be sure, but between these extremes are gradations in standards of living that run the whole gamut from genuine privation to satiety. It is evident, then, that with inequality in incomes goes inequality in standards of living.

Many attempts have been made to determine the amount of income that is necessary to provide for the basic needs of a family of five. Such an estimate, which was called a "Minimum Health and Decency Budget," was published by the United States Bureau of Labor Statistics in 1919,⁴ and has been brought up to 1940 by the Labor Research Association. The budget includes the following items:

1. Nourishing food.
2. Houses in low-rent neighborhoods and with the smallest possible number of rooms consistent with decency (about four rooms and a bath).
3. The upkeep of household equipment, but with no provision for the purchase of additional furniture.
4. Clothing sufficient for warmth, but with no further regard for style than would permit one to appear in public without slovenliness or loss of self-respect.

⁴ *Monthly Labor Review*, December, 1919, pp. 22-29.

5. Services of doctor, dentist, and oculist, \$80; amusement and recreation, \$20; union dues, \$10; church and religious organizations, \$13; incidentals, \$52.

It should be borne in mind that this is a *minimum* budget, and one which, according to the Bureau of Labor Statistics, "does not include many comforts which should be included in a proper 'American Standard of Living.'" The Bureau found that this standard of living could be purchased in Washington, D. C., in 1919, for \$2262.47. The Labor Research Association estimated the budget, in 1940, as costing from a minimum of \$1770 in Reading, Pa., to a maximum of \$2262 in San Francisco, Cal., with an average cost of \$1982 for ten American cities. In 1935-36 (the period to which the income figures in Table 30 apply), the average cost of this budget in the country as a whole was \$1911, or slightly less than in 1940.

On the strength of these figures, it might seem that no total income which fell below \$1770 in 1935-36 could be considered a "living wage," since that amount was the *lowest* cost of the budget specified by the government as representing the bottom level of health and decency. But this would be true only if every income were spent on a family of five or more persons, and this is clearly not the case, for 10 million of the incomes in Table 30 are those of single individuals. The National Resources Committee throws additional light on the situation by isolating and analyzing the *family* incomes. This analysis shows that the least prosperous 21 million families (or 72.60 per cent of the total) had incomes of \$1750 or less, that the least prosperous 16 million families (54.88 per cent) had total incomes of \$1250 or less, and the least prosperous 7 million families (27.13 per cent) had total incomes of \$750 or less.

It would be incorrect to suggest that *all* of these 21 million families were compelled to live below the standard of health and decency. Some of them doubtless consisted of so few persons that their standard was well above the poverty level. But there were unquestionably many families of five or more persons (and some considerably larger than five) that had less than \$1750 income apiece, and in instances of this kind there is real cause for apprehension and need for a remedy. Especially desperate was the situation of the 16 million families with annual incomes of less than \$1250 each and the 7 million of these which had less than \$750 for the year.

As we have already noted, these 1935-36 figures relate to a period of depression, when the national income was about 25 per cent lower than in the prosperous year of 1929. But the story they tell us is essentially the same as is told for 1918 by the detailed data that are available for that year of excellent business. And the same general thesis—that millions of families in the United States are never above the "health and decency" level of earnings—is confirmed by an examination of in-

comes in the boom year of 1943. In that year of enormous production, manpower shortages, and unusually high wages in many industries, nearly 15 million, or 36.6 per cent, of our "consumer units" (families or individuals) had \$1750 or less to spend.⁵ In that year also, the Bureau of Labor Statistics found that the average cost, in thirty-three cities in the United States, of a "maintenance level" family budget which "does not approach the content of what may be considered a satisfactory American standard of living" was \$1768.⁶

The lack of exact data about these unfortunate members of society must not be allowed to blind us to the fact that poverty has existed and still exists in the United States. "Poverty," says Dr. Robert W. Kelso, "is that condition of living in which the individual, whether from lack of means or the failure to apply them, consistently fails to maintain himself, and those properly dependent upon him, at a plane of living high enough to insure continuous bodily and mental fitness to carry on permanently in his occupation and locality; and which allows him and them to live and function in their community with decency and self-respect." With this concept of poverty in mind, Dr. Kelso reaches the conclusion "that the unskilled laborers of America live in poverty; and that of those who work with their hands but are nevertheless skilled, from a third to a half possess [under our present social arrangements] neither the means nor the potentiality for the maintenance of a minimum standard of social competency."

In addition to the study of the National Resources Committee, we may mention conclusions reached in other surveys of family incomes. In 1918, the United States Bureau of Labor Statistics studied the incomes of more than 12,000 families (average size, 4.9 persons per family) in 92 localities of 43 states, and discovered that the average *family income* was \$1513, or \$700 less than the Bureau's health and decency budget in 1919, when general prices were substantially the same as in 1918.⁷ A study of 100 families in Muncie, Indiana, in 1924, revealed the fact that the *total family income* of 74 of these families was below the budget estimate of the Bureau of Labor Statistics.⁸ An inquiry into the incomes of 467 families of unskilled workers in Chicago, in 1924, showed that slightly more than one-half of these families were able, *with income from all sources*, to meet the Chicago Standard Budget for Dependent Families, placed at \$1548.84 *over and above rent*.⁹ A survey of Philadelphia family

⁵ *The Economic Almanac, 1946-47*, New York, National Industrial Conference Board, 1946, p. 58.

⁶ *Labor Fact Book 7*, New York, International Publishers, 1945, p. 128.

⁷ *Monthly Labor Review*, December, 1919, p. 41.

⁸ Robert and Helen M. Lynd, *Middletown*, New York, Harcourt, Brace & Company, Inc., 1929, p. 85.

⁹ Leila Houghteling, *The Income and Standard of Living of Unskilled Laborers in Chicago*, Chicago, University of Chicago Press, 1927, p. 130.

incomes, made in 1928 under the auspices of the *Public Ledger* of that city, indicated that "50 per cent of the families have an income of less than \$2000 yearly."¹⁰ A study of the incomes of 536 working-class families, conducted by the New York State Department of Labor, showed that "half of the families had an income which was less than the amount necessary to maintain a standard of living at a minimum of decent subsistence for a family of five."¹¹ Finally, there is the estimate of the Brookings Institution, to the effect that about 12 million families in the United States, or more than 42 per cent of the total, had family incomes of less than \$1500 each in 1929.¹² These scattered investigations, and others leading to similar conclusions, are sufficient proof that poverty does exist in this country, though to what extent it is impossible to say with any degree of accuracy or assurance.

If these total family earnings are at all representative of the incomes of large numbers of the people of the country—and we believe they are—it follows that there is widespread poverty in this richest of all nations. But is this poverty the result of inequality of distribution, or does it arise, rather, from the fact that our national income is not large enough to provide a satisfactory standard of living for the country as a whole? The answer to this question may be found in the *per capita* income of the United States. If we assume a national annual income of only 90 billion dollars and deduct 15 billion for additions to industrial equipment (our estimated national income and savings, respectively, in pre-depression 1929), we have left some 75 billion dollars available for the purchase of consumers' goods over a twelve-month period. If production did not decline under a régime of strict equality, we could divide this amount on a per capita basis, giving \$625 to every man, woman, and child, or a total of \$3125 for a family of five. We are not advocating equality of income, either for all members of society or for all engaged in economic activities, but we present these figures to show that poverty is attributable to the way in which goods are distributed rather than to a shortage of economic goods. An allowance of \$3125 would seem appallingly low to a considerable fraction of our people, but it would raise materially the standards of living of the rank and file, and would unquestionably convert the United States into a country in which poverty was virtually unknown, if the cost of living remained unchanged. And if we should find it possible to produce as large a national income in time of peace as in wartime (that is to say, 150 billion dollars' worth of usable goods), it is obvious that the standard of living could be raised to hitherto unheard-of heights.

¹⁰ *Philadelphia*, Chamber of Commerce, Philadelphia, January, 1929, p. 14.

¹¹ Stuart Chase, *Prosperity: Fact or Myth?*, New York, Albert and Charles Boni, Inc., 1929, pp. 86, 87.

¹² Maurice Leven, Harold G. Moulton, and Clark Warburton, *America's Capacity to Consume*, Washington, Brookings Institution, 1934, p. 55.

In a later chapter¹³ we shall show that great inequalities in wealth and income lead to conspicuous consumption, and shall argue that a move in the direction of equality would tend to reduce waste of this kind. This is almost necessarily the case, for there would be but little point to an attempt to "show off" through competitive spending in a society in which incomes were wholly, or even approximately, equal. The attractiveness of conspicuous consumption lies chiefly in the ability to spend on a scale so grand that at least some other members of society are outshone. In a society in which incomes range from hundreds to millions, there is likely to be a very large number of "income classes," with each class striving to outdo the class immediately beneath it in the scale. But in a society in which incomes were equal, there would be little incentive, as well as little opportunity, for conspicuous spending. The fact that any family, by virtue of the equality of money incomes, could match the spending of any other family would detract immensely from the zest of the game and would, in all probability, sound the death knell of conspicuous consumption.

In dealing with problems of consumption,¹⁴ we shall undertake to distinguish between individual and social waste of this kind. We shall suggest that there is *individual waste in consumption* whenever an individual, for any reason whatsoever, fails to secure the maximum of utility through the expenditure of his money income, and *social waste in consumption* whenever society fails to get the maximum of total utility from whatever goods are produced by society as a whole. We shall indicate, further, that in the presence of extreme differences in individual incomes the attempts of individuals to maximize the utility to be derived from their money incomes may easily lead to social waste in consumption. Indeed, it is scarcely too much to say that the elimination of both individual and social waste in consumption can be attained, if at all, only in a society in which differences in incomes are far less pronounced than at present. An acceptance of the Law of Diminishing Utility leads to the conclusion that, in all probability, the greatest possible social satisfaction is dependent upon approximate equality of money incomes. If, then, we should ever achieve such an equality, we might expect also to achieve the maximum social satisfaction; and it is conceivable that we might have, at the same time, the maximization of satisfaction from the expenditure of individual money incomes—in which case we should have eliminated waste in consumption!

It is a commonplace that "money talks," and it appears to talk loudest and most effectively when it is concentrated in considerable quantities. The "demand" for an article consists, of course, not only of desire for the good but also of purchasing power to back up that desire. As a con-

¹³ Chap. 30.

¹⁴ Chaps. 29 and 32.

sequence of this fact, the things that rich men want are more likely to be produced than the things that poor men need. If a Philadelphia millionaire wants a \$5,000,000 private yacht while workingmen need small, sanitary houses, the yacht is built and the workers and their families continue to live in tenements. Whenever agents of production are diverted from the making of necessities and used in the manufacture of luxuries, there is a tendency for the prices of necessities to rise, so that the person of small income gets less for his money than he would have been able to get if luxuries were not produced. Obviously, there would be no \$5,000,000 private yachts,¹⁵ \$1,000,000 "coming out" parties,¹⁶ \$60,000 sable coats,¹⁷ or \$2000 silk hosiery,¹⁸ if incomes were anything like equal; and as a consequence the plain, substantial goods that minister to the needs of the many would be produced in larger quantity and sold at smaller prices than at present.¹⁹ Furthermore, there can be no doubt that many poorly paid persons now spend part of their incomes for the sake of keeping up appearances, and under existing circumstances such spending may be necessary for the maintenance of self-respect. But a reduction in the inequalities of incomes (such as might be expected to result from an increase in equality of opportunity) would lessen the opportunity for ostentatious display and make feasible the expenditure of incomes for solid comforts instead of some of the tawdry jimcracks that class conventions make necessary today.

Economic Inequality and Economic Security. A study of present-day economic life shows that fluctuations in business activity lead to instability of income that affects, to a greater or lesser degree, the members of all of the many income groups found in our economic organization. However,

¹⁵ The *Savarona*, built for Mrs. Richard M. Cadwallader of Philadelphia in 1931, was said to have cost this sum. This "finest private sailing vessel the world has ever seen" was manned by a crew of seventy. (*The New York Times*, July 19, 1931, and October 11, 1931.)

¹⁶ "Auditors of the Mayflower Hotel, in Washington, report that the famous party which Mr. H. L. Doherty, of Cities Service, threw there in honor of his adopted daughter, cost him a cool million dollars, or, in other words, \$500 for each of his 2000 guests." (*New Republic*, January 7, 1931.)

¹⁷ *The New York Tribune*, of September 25, 1921, listed some of the personal possessions of Mrs. Edward Henry Smith Wilkinson, of Nottingham, England, including \$3,400,000 worth of jewelry, \$128,000 worth of gowns, \$64,000 worth of hats, and a \$60,000 sable wrap. (Cited in Stuart Chase, *The Tragedy of Waste*, New York, The Macmillan Company, 1926, p. 90.)

¹⁸ In the *Philadelphia Bulletin*, of October 5, 1931, appeared a picture of "the most expensive hosiery in the world." They were made "of sheerest chiffon, ornamented with diamonds set in pendants of platinum," and cost \$2000 per pair.

¹⁹ In this statement is found the answer to a question that is often asked, Does not the extravagant spending of the rich benefit the poor by providing them with work? The concentration of money *does* lead to a demand for expensive goods, and thus it provides employment. But this money, if more equally distributed, would still lead to a demand for goods—though, as we have suggested above, for goods of a simpler type—and there is no reason to suppose that it would provide any less employment than when spent for luxuries.

it should be clear, from our chapters dealing with economic insecurity, that variations in income do not affect all groups in the same manner or to the same extent. When industrial depression forces a successful manufacturer to close down his plant temporarily, his manner of living and that of his family are not, as a rule, substantially altered. He may have to dispense with one or two of his cars, to get along with fewer servants, and perhaps to take his family on a relatively inexpensive trip to Europe during the summer season, instead of opening up his elaborate and costly warm-weather retreat in the Adirondacks. But so far as his needs and most of his comforts are concerned, he does not suffer. He does not have to cut down on his consumption of meat, his children need not go without milk, nor are he or his dependents in danger of eviction from their home for non-payment of rent.

But it is precisely these hardships, and others of similar nature, that must be endured by the families of many workingmen whenever a serious business depression overtakes society; and this, judging from past experience, means at least once in every decade. In our discussion of unemployment, we gave some attention to the human suffering caused by a shortage or total loss of income during periods of depression. There is no need to multiply the harrowing details, as related by social workers. That privation is the portion of many in our years of industrial blight is evident from the fact that, in the great post-1929 depression, less than five dollars a week *per family*, provided by a Relief Committee, was the sole income of most of the unemployed of Philadelphia who received aid from this Committee. Certainly, a very large number of the 12 million unemployed Americans fared no better than the jobless citizens of Philadelphia and other great cities. The wealthy and middle classes may have to retrench at times, as we have indicated above, but they know nothing at first hand of the skimping that falls to the lot of millions of members of the so-called working class.

The hazards of occupational disease and industrial accidents fall very heavily upon the wage-earning group. We noted in Chapter 26 the inadequacy of the accident compensation laws of most of our states. Except so far as hospitalization and medical treatment are provided through social or governmental agencies, the cost involved in securing these vital services either places them beyond the reach of the average worker or, by consuming a part of his income, crowds other essential items out of his meager family budget. The outcome of this situation is that many people who need medical attention fail to get it. In a nation-wide survey conducted in 1938, the American Institute of Public Opinion found that 42 per cent of those interviewed throughout the country said that they had put off going to the doctor, at some time or other, because of the cost. And, of course, the loss of working time that results from accident or illness affects the worker's income in a way quite outside the experience

of those whose incomes are derived from property. Interest and dividends are wholly independent of the health of their recipient. The fact that he is well or sick, working or idle, does not affect the regularity or the size of such payments. Wage incomes, on the contrary, depend upon the health of the worker in the sense that usually they are promptly cut off if ill health interferes with his ability to engage in productive work.

The rich get old as surely as the poor, though perhaps not so rapidly, if we think in terms of physical deterioration, since they are able to get the best medical and surgical attention that money can buy. In the preservation of health, more fully than in most matters, it is true that a stitch in time saves nine. The great age of some of our millionaires is at least partly attributable to their ability to engage the services of personal physicians, whose duty it is to keep their employers in health, and to the fact that any aid to health—such as residence in Florida in winter and in Maine in summer—is well within their reach. But whether physical decline comes soon or late, economic old age, in the form of loss of income, overtakes large numbers of our citizens and, in effect, makes beggars of them. The prospect of old age seldom holds for the rich the same fear of dependency that it holds for the poor. We have already seen that of all persons in this country who attain the age of sixty-five, two-thirds are dependent upon public or private charity, either wholly or in part. Now, no one would contend that the groups whose incomes appear in the upper income brackets—that is, the well-to-do and the wealthy—furnish their per capita share of these aged paupers. The specter of old age dependency is reserved almost exclusively for the contemplation of the propertyless masses—those who have no personal stake in the great accumulation of national wealth of which even they have been taught by press and public school to be proud.

We are concerned here not with the *manner* in which economic insecurity causes the annual incomes of millions of our people to be lower than they would otherwise be, but with the fact that, because their customary wages are low, a loss in income is a much more serious matter to them than to those whose normal incomes are high. Coming events cast their shadows before, and the psychological effects of the temporary or permanent loss of economic competency long precede the fact, because of the worker's ever-present fear of that loss. Its physical effects are paraded before his very eyes, as he sees his children stunted, both physically and mentally, by his inability to secure the steady income needed to provide for their proper development.

Furthermore, whatever uncertainties the incomes from property may be subject to, it is evident that variations in these incomes do not lead to such grave effects upon the lives of their recipients as are produced by fluctuations in wage incomes upon the daily lives of the large percentage of our population that find it impossible to accumulate property. Wage

incomes do not permit of expansion to meet the needs of emergencies. As one writer has pointed out, "a wage or salary can rarely be capitalized in times of special need, such as illness (except by means of insurance payments), while income from property, unless the capital is 'tied up,' can within limits be increased at will, by selling or mortgaging part of the principal."²⁰

Economic Inequality and Educational Opportunity. According to figures compiled by government officials, approximately 23 per cent of the total population of the United States was enrolled in schools and colleges in the year 1936. Table 32 shows the distribution among the

TABLE 32. ENROLLMENT IN SCHOOLS AND COLLEGES
IN THE UNITED STATES, 1936

(Source: *Statistical Abstract of the United States, 1939*)

	Number	Per Cent
Elementary and kindergarten.....	22,706,805	74.8
Secondary schools.....	6,424,968	21.2
Colleges and normal schools.....	1,208,227	4.0
Total.....	30,340,000	100.0

several classes of educational institutions. The enrollment was heavy in the elementary schools, but decreased greatly in the secondary schools, and still further in colleges and normal schools. If all children were to continue their education through high school and college, we should expect the number of secondary and college students together to approximate the enrollment in elementary schools, since the elementary work covers as long a period of time as the high-school and college work combined. However, we find that there were only one-third as many students in secondary schools and colleges as in elementary schools in 1936. A rough and admittedly inexact calculation indicates that of every group of 100 elementary students, about 55 reached high school while only about 10 went on to college or other institutions of advanced training. Comparable figures were 40 in high school and 10 in college in 1930, and 68 in high school and 14 in college in 1942.

We have no intention of suggesting that all students who fail to get to high school or college are the victims of economic inequality. As everyone knows, there are many boys and girls who are so lacking in ability that they simply cannot "make the grade," while others detest mental exertion so heartily that they insist on ending their formal education at the earliest possible moment. The fact remains, however, that education—even "free" education—is costly, and large numbers of boys and girls with

²⁰ Josiah Wedgwood, *The Economics of Inheritance*, London, George Routledge & Sons, Ltd., 1929, p. 10.

good minds and abundant ambition are forced by economic necessity to get along without it. The existence of child labor on a large scale²¹ in some sections of the country means that even an elementary education is beyond the reach of a considerable portion of the population. Laws providing for compulsory school attendance, but specifically exempting children whose parents cannot supply them with proper clothing—as do the laws in some of our states—are sufficient evidence that education may be “free” and at the same time so expensive that members of our low-income groups are unable to take advantage of it. We have here, in all probability, at least a partial explanation of the fact that in 1930 there were 4,283,753 illiterates in the United States.²² This number included 4.3 per cent of the total population over ten years of age.

Despite the growth of tax-supported elementary schools and high schools and the great development of state universities, it still remains relatively true that learning and the paraphernalia of culture are readily available to the children of the well-to-do, but difficult of attainment by the poor. When the son of a coal miner quits school as early as the law allows, or as soon as he can get his working papers, we are not surprised. If the son of a rich man fails to get his bachelor's degree, it is a matter for inquisitive comment. The “health and decency budget” of the American worker includes no allowance for “higher education,” but the son of the wealthy business or professional man goes to college as a matter of course, and spends in a college year a sum greatly in excess of the average *total family income* of the unskilled or semi-skilled workers of this country.

The oft-repeated statement that anyone who has ability and really wants a college training can get it, is simply not true. It is a bit of pleasant palaver, comparable to the saying that every boy has a chance to be President. The fact is that an ambitious young man may be prevented from going to college or professional school by the absence of a high-school training, which was rendered impossible by the necessity of contributing to the family budget in early youth; he may lack the unusual physical stamina that is needed to pursue college studies and earn a living at the same time; or he may find it necessary to help support his family but impossible while paying his college expenses and carrying his college work. Obstacles such as these may easily be insurmountable even for an exceptionally able young man. They are difficulties such as the well-to-do and the wealthy seldom have to face. As a consequence of inequalities in income, the enrollment in our colleges and universities is

²¹ In 1940, there were 1,278,812 children, fourteen to seventeen years of age, listed among the “gainful workers” of the United States. This figure included 5.2 per cent of all persons in the country who were fourteen or fifteen years of age, and 21.0 per cent of all persons sixteen or seventeen years old.

²² *Statistical Abstract of the United States, 1939*, p. 41.

based very largely on financial status.²³ To a lesser degree, this is true of secondary schools also.

The absence of equal opportunity for education means that the members of families having small incomes are greatly restricted in their choice of occupations. Having made a study of the movement of individuals between classes in England, Professor Morris Ginsberg reached the conclusion that "the social ladder so far lifts only relatively small numbers." The difficulties experienced by working men in rising to higher economic positions have led some Europeans to refer to the United States as the land of unlimited opportunity. However, the data on American incomes presented in this chapter show that, while we are an extremely wealthy nation, we are not so prosperous as individuals. The all-important consideration is not the *possibility* but the *probability* of "getting up in the world." Inequality of income provides both a large number of persons anxious for economic advancement, and an attractive goal toward which to strive, but it brings so great an inequality of educational opportunity as to make advancement for the masses highly improbable. "A right to the pursuit of happiness," as Mr. R. H. Tawney points out, "is not identical with the right to attain it." Until we have a larger degree of equality of income, it is idle to speak of equality of opportunity.

Economic Inequality and Legal Justice. Equality before the law is a matter of supreme importance, and civilized nations have long boasted that they provide a legal "square deal" for all persons, of both high and low degree, coming within their jurisdiction. But for some years there has been growing up, in America at least, the notion that the law before which all are supposed to be equal provides one kind of justice for the rich and another for the poor. This unpleasant suspicion arises from the fact that while all citizens may be equal before the law, the machinery through which the law operates works most smoothly and satisfactorily for those who are able to pay a good price. We are not suggesting that judges

²³ Of course, the "G.I. Bill of Rights," by providing training for veterans at government expense, has changed the situation for hundreds of thousands of service men and women; but this legislation offered educational assistance only to selected groups and over a limited period of time. However, President Truman's Commission on Higher Education for American Democracy has made proposals directed "toward equalizing opportunity" which, if put into effect, would do much to solve a part of the problem of economic inequality. Following are extracts from the Commission's first report, presented December 15, 1947:

"The American people should set as their ultimate goal an educational system in which at no level—high school, college, graduate school or professional school—will a qualified individual in any part of the country encounter an insuperable economic barrier to the attainment of the kind of education suited to his aptitudes and interests. . . .

"We may be sure that the private colleges and universities will, in the future as in the past, contribute immeasurably to the expansion and improvement of our facilities for higher education, and it is hoped that they will be able to find the necessary funds without increasing the cost to the individual. But in the nature of things the major burden for equalizing educational opportunity must rest on publicly supported institutions."

and juries are susceptible to bribery, though this is occasionally the case. Rather, we have in mind the costliness of legal procedure. The services of lawyers, with certain honorable exceptions, are bought and sold in the open market as material and labor for manufacture are bought and sold. This means, when combined with the practice of assessing court costs, that equality before the law is little more than a legal fiction, since justice dealt out under such circumstances has a price, just as truly as an automobile, a coat, or a loaf of bread has a price.

The almost insuperable obstacle that faces a poor man who challenges a rich individual or corporation in the courts is illustrated by the following example of one expensive phase of legal procedure—the cost of appeals to higher courts:

Once upon a time there was a brakeman who sued a railroad because of injuries sustained in the course of his work. He was awarded \$4000 damages. The company appealed, and two years later the judgment was reversed. The brakeman sued again, and this time was awarded \$4900 damages. The company appealed, and again the judgment was reversed.

Three years after this the plaintiff sued a third time. In this instance the judgment was for the company; whereupon, five years later, the brakeman himself appealed. Failing, he went to a higher court, and, after another three years had passed, won a reversal and a fourth trial. He won a fifth trial. The company appealed. He won a sixth trial. The company appealed. With a seventh trial the business reached its end, and the plaintiff walked away \$4500 richer and eighteen years poorer. Poorer, too, for whatever he had paid out in legal fees.²⁴

Moreover, those whose purses are well lined are enabled—through postponements, appeals, and other legal devices—to put off and often to escape the consequences of violations of the law that would quickly land lesser men behind the bars. The oil scandals and other malodorous federal cases that were aired some years ago indicated clearly that it pays to be well heeled when the law is on one's trail. Indeed, it sometimes appears that the chance of evading punishment for misdeeds is directly proportional to the size of one's bankroll. The wholesale rumrunner is more completely immune from successful prosecution than the retailer who peddles by the pint. The banker who steals on a large scale is less likely to draw a long sentence than the clerk who deals in petty theft. For the vast majority of principals in both civil and criminal cases, as we have already intimated, the lower courts become in fact the courts of last appeal, but for those who have abundant financial resources the higher courts open up almost endless possibilities for the delay and even the perversion of justice. "There is one law for the rich and another for the poor," writes Professor Laski, "whenever the preparation of a defence is an item of importance in the case." Something could be done in the way of aiding justice in our criminal courts, if we were to provide *public defenders* of ability as we

²⁴ *The New York Times*, February 14, 1940.

now provide *public prosecutors*, so that the defendant's case would be adequately presented regardless of his financial status; but on the whole we need not look for genuine equality before the law until we have achieved at least a reasonable degree of economic equality.

Economic Inequality and the Control of Government. What has been said about economic inequality meaning inequality in standards of living, economic security, educational opportunity, and access to the courts may seem to some readers to be more or less obvious. In the field of politics, however, we see an aspect of inequality which is much less generally recognized, but which must not on that account be considered less important than the inequalities we have already noted.

The enthronement of the principles and forms of political democracy, in the late eighteenth and early nineteenth centuries, did not mean that all men were to have an equal voice in government, despite the great pronouncement "All men are created free and equal." It meant, rather, that political power was to rest with those who already held economic power. In a capitalistic system of society, economic power is derived chiefly from the ownership of property. It is primarily the distribution of property, therefore, which determines the distribution of political power.

"Government is a form of social organization which has developed because, in the long run, it has afforded the means of supplying men with certain services more efficiently and more economically than these could have been supplied by each for himself."²⁵ But precisely which services are to be supplied socially is a question that is not decided merely by setting up a definition of this kind. Whether the provision of electric current, compensation for industrial accidents, or tariff protection against competing commodities should be undertaken by governmental agencies are matters which must ultimately be determined by political means. With strict equality of political power, a laborer would have quite as much influence as his employer in deciding such questions. Henry Ford and his lowliest mechanic, for example, would have an equal voice in determining how high the tax on super-incomes should be. But no intelligent person believes for a moment that this is the situation today.

It is not without significance that when ex-Ambassador James W. Gerard set out to name the actual rulers of the United States some years ago, he drew up a list of sixty-four wealthy industrialists and financiers, including a sprinkling of prominent newspaper publishers. In any modern political state, numerous and diverse demands are continually being made upon the government by the citizens. Not all of these demands can be satisfied. Consequently, there must be adopted some process of selection through which the government may choose from among these multitudinous demands those which shall be met, and announce, for instance, "We shall provide pensions for the veterans of foreign wars, but not for

²⁵ H. L. Lutz, *Public Finance*, New York, D. Appleton & Company, Inc., 1936, p. 3.

the veterans of industry." This process of selection is one of necessity. If an administration is to survive, it must satisfy the demands of that portion of the electorate that is most powerful—that is, of those citizens who, if their wishes are not complied with, will bring about a change in administration. The extent to which individuals can gain recognition of their desires depends, therefore, upon their ability to enforce their demands. The ability to enforce political demands is a function of economic power which, except where labor has mobilized its strength for collective political action, rests primarily upon the ownership of property. To expect any substantial degree of equality of political influence in the presence of great inequality of wealth and income is to assume that men possessed of tremendous economic power will refrain from exercising that power through political channels. That they do not refrain is sufficiently clear from past experience. Rather, by the expenditure of large sums, they influence nominations and elections, and demand that our legislators pass measures that will strengthen them—the propertied classes—in their control of the political machinery of the country. "These men," said Mr. Gerard, in submitting his list of America's "rulers," "are too busy to hold political office, but they determine who shall hold such office." Here, then, is another form of gross inequality that has grown out of economic inequality, upon which it continues to fatten. And here, again, the remedy, if we are to find one, appears to lie in the achievement of a larger degree of equality of opportunity.

1. "Inequality breeds inequality, and thus perpetuates a condition that keeps some persons from attaining the full development of their abilities." Explain.
2. Argue that equality of opportunity does, or does not, exist in the United States today.
3. Cite figures showing that there is inequality in the distribution of income in this country.
4. What was the *average* income in the United States in 1935-36, as computed by the National Resources Committee?
5. "The larger the income, the smaller is the proportion of the income that comes from wages and salaries, and the larger is the proportion from property." From what source is it possible to get information of this kind?
6. What is the meaning of the term "standard of living"?
7. What items are included in a "minimum health and decency" standard of living? How much does such a standard cost?
8. Through what process of reasoning may we arrive at the conclusion that there is "poverty for many in this land of plenty"?
9. It is believed by many that "conspicuous consumption" arises very largely out of inequalities in income. State the line of argument that appears to lead to this conclusion.

10. Is the purchase of very expensive luxuries by the wealthy beneficial or harmful to the poor? Explain.
11. Cite examples of extravagant expenditure.
12. What can be said for the argument that the conspicuous spending of the rich provides work for those who would otherwise be unemployed?
13. Discuss the consequences of business depressions, as they affect the well-to-do and the wealthy, on the one hand, and the poor, on the other.
14. "Interest and dividends are wholly independent of the health of their recipient, but wages are not." Explain the significance of this statement.
15. "The rich have a better chance than the poor of living to a 'ripe old age.'" Why?
16. Discuss the relationship between economic inequality and educational opportunity.
17. What percentage of the population of the United States is illiterate?
18. Is it not true that anyone who has ability and really wants a college training can get it? Explain.
19. This chapter argues that the poor fare less well than the rich, so far as legal justice is concerned. Defend or refute this contention.
20. Explain the significance of Mr. Gerard's statement about "the actual rulers of the United States."

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Economic Inequality: Causes and Cures

KEEPING IN MIND THE CONSEQUENCES OF ECONOMIC INEQUALITY, AS OUTLINED in the preceding chapter, we may now inquire briefly into its causes and then suggest some measures the adoption of which would certainly bring about a larger degree of equality of opportunity than now exists, and might even make life bearable for those who, because of their limited endowments, are unable to "make good" when thrown wholly upon their own resources.

THE CAUSES OF ECONOMIC INEQUALITY

Differences in Natural Endowments and in Luck. If we could trace economic inequality to its beginnings, we should doubtless find that it has started, in all instances, either from inequalities in individual abilities or from inequalities in "luck as regards circumstances which it is beyond the power of the individual either to forecast or control."¹ The existence of differences in natural endowments is beyond dispute. Even within the limits of a single family are found variations of such extent that, despite equality of environmental opportunity, one child reaches great heights while another barely escapes mediocrity. No one who has looked into the matter at all carefully is likely to make the mistake of contending that all men are created equal, in the sense of being provided by nature with identical mental and physical capacities.

On the question of luck, there is perhaps more room for argument. Some persons subscribe to the copybook maxim of James A. Garfield that there is no such thing as luck, while others are more inclined to agree with the late Julius Rosenwald, the multimillionaire head of Sears, Roebuck and Company, who once said, "I believe that success is 95 per cent luck and 5 per cent ability."² Probably the truth lies somewhere between these two extremes. There are certainly some great economic successes that have had in them a large element of luck, chance, or good fortune—

¹ Josiah Wedgwood, *The Economics of Inheritance*, London, George Routledge & Sons, Ltd., 1929, p. 57.

² *The New York Times*, January 7, 1932.

call it what you will—while examples are not lacking of achievements that seem to rest chiefly, if not wholly, upon the possession of unique abilities.

Differences in Environment. But however inequalities may have come about in the first place, there can be no doubt that they have been perpetuated, in many instances, through differences in environment and through inheritance. Americans in particular are prone to advance the argument that persons of ability may be trusted to rise above their environment, no matter how hopelessly situated they may appear to be. The cheerful philosophy that a good man cannot be kept down has been properly and seriously questioned by Professor Hobson, who says:

The notion that genius, like murder, will "out" is a false sentimentalism. Some men of genius do, indeed, make their way in spite of adverse circumstances, forcing themselves out of the obscurity of their surroundings; they "break their birth's invidious bar, and breast the blows of circumstance, and grasp the skirts of happy chance." That is to say, some sorts of genius are united with qualities of audacity, persistence, and luck, which enable them to win "through." But how many men of genius do not possess these faculties and therefore do not emerge, it is from the nature of the case impossible to learn. But it is probable that much genius, talent, and ability, capable of yielding fine social service, is lost. Indeed, it is probable that many of the finest human variations, involving unusual delicacy of feeling and perhaps of physique, will by natural necessity be incapacitated for making their way and forcing recognition amid uncongenial surroundings.

It is likely that far more human genius is lost than is saved, even in the more civilized nations of today. For what are the conditions of the successful utilization of genius, and for what proportion of the population are they securely attained? Leisure is a first condition for all free and fruitful play of the mind. . . . Education is the next condition. . . . Until all the new minds brought into the world are placed in such free contact with every fertilizing current of thought and feeling, and enjoy free, full opportunities of knowing the best that has been thought and said in all departments of human knowledge, we cannot tell how much creative faculty perishes for lack of necessary nutriment.³

Inequalities, then, are passed on from generation to generation because of the environmental differences that result from inequalities. As Professor Pigou puts it: "The environment of one generation *can* produce a lasting effect, because it can affect the environment of future generations. Environments, in short, as well as people, have children."⁴ The environment of the well-to-do is conducive to the development of native abilities; the environment of poverty is not. Thus we have a vicious circle, in which economic inequalities lead to inequalities of opportunity, and these in turn give rise to still further inequalities in economic status. "Wealth in modern societies is distributed according to opportunity," writes Mr. Tawney. "And while opportunity depends partly upon talent and energy,

³ J. A. Hobson, *Work and Wealth*, New York, The Macmillan Company, 1926, pp. 51, 52.

⁴ A. C. Pigou, *The Economics of Welfare*, London, Macmillan & Company, Ltd., 3rd ed., 1929, p. 115.

it depends still more upon birth, social position, access to education and inherited wealth; in a word, upon property. For talent and energy can create opportunity. But property need only wait for it.”⁵

Obviously, the prospects of two boys of equal natural endowments—one the son of a pick-and-shovel man, the other born of wealthy parents—are widely different. The former, as Mr. Tawney suggests, may create opportunity through his heritage of talent and energy, but the latter has opportunity almost thrust upon him. From childhood to manhood, his health is looked after; his schools and college are chosen with care, and tutors are provided if they appear to be necessary; the proper social contacts are developed; and, finally, if he is to take up business or a profession, his father, or other relative, or perhaps a friend of the family, is ready with a suitable opening.

The Influence of Inheritance. But inequalities are passed on, also, through the institution of inheritance. Indeed, inheritance is believed by most economists to be the chief agent for the perpetuation of economic inequalities. The figures given in Table 31 show clearly that the ownership of property accounts for much of the income received today by the well-to-do and the rich. Through inheritance, this property is handed down from father to son, and the inequalities of today become the inequalities of tomorrow. Professor Taussig, in dealing with the effect of inheritance upon inequality, has said: “Its influence is enormous. It is this which explains the perpetuation of the incomes derived from capital, land, income-yielding property of all sorts, and so explains the great continuing gulf between the haves and the have-nots.”⁶

Not only are inequalities continued through inheritance, but in many instances they are vastly increased, since great fortunes have the habit of multiplying. The Astor fortune, started by John Jacob Astor more than a century ago, is a case in point. The 20 millions left by him in 1848, plus a half-million left by Henry Astor, had by 1905 grown to 275 millions. It is possible, of course, that those through whose hands this fortune passed added to it not only by saving a part of the interest, dividends, and rents that this great accumulation of property brought them, but by exercising their personal abilities as well. But whether true or not, this point does not concern us here. What is important for our purposes is to note that there was no need for the descendants of John Jacob Astor to exert themselves unless they wished to do so. The property at their disposal assured them an income so large that whatever they desired in the way of “the good life” was theirs for the asking, provided only it was something that could be had for money.

⁵ R. H. Tawney, *The Acquisitive Society*, New York, Harcourt, Brace & Company, Inc., 1921, pp. 33, 34.

⁶ F. W. Taussig, *Principles of Economics*, New York, The Macmillan Company, 4th ed., 1939, vol. ii. p. 298.

Inherited wealth has a slighter influence upon economic inequality in newly settled countries than in those which have been long exploited, because of the greater opportunity to acquire an income through taking up cheap land, or getting in on the "ground floor" of an industry and "growing up" with it. But this is a stage which passes fairly quickly. On this point Professor Cannan has observed: "As the United States ceases to be a 'new' country, more and more property will be inherited in proportion to that which is acquired in the lifetime of a generation, and there will consequently be more scope for inequality of inheritance. . . . America may be free from inequalities arising from grants of land made by William the Conqueror, but it is just as easy to be the lucky inheritor of a farm which becomes part of the site of a great city there as in England. The Astor inheritance in America has the same source as the Grosvenor inheritance in England, and the Vanderbilt and Morgan millions are no more likely to 'disintegrate' than those of the Rothschilds."⁷

As was suggested in the last sentence of the preceding paragraph, the day has passed when the old adage of "three generations from shirt-sleeves to shirt-sleeves" had some significance. Some of the fortunes of today are so huge that there is no danger of their being dissipated, particularly in view of the recent development and wide use of trust funds. Though invested, in the interests of security, at a very low rate of return, they still provide incomes so large that they cannot be spent without genuine effort on the part of the recipients. Hence it is that the concentration of wealth proceeds apace, and inequalities become progressively greater with the passage of time. It seems fair, therefore, to say that the institution of inheritance is the chief instrument in perpetuating and increasing inequalities. Consequently, any serious attempt to solve the problem of economic inequality must include a modification of this ancient institution, the present-day usefulness of which is in serious question.

PROPOSED METHODS OF DISTRIBUTION

The obvious and glaring inequalities in the distribution of income have led certain socially-minded persons to question whether the basis on which income is distributed is fair and just. Indeed, some of the doubters have gone so far as to propose substitutes for the principle of distribution—reward on the basis of contributions to the economic process—which, as we have seen, seems in general to explain the division of the national income among the owners of the agents of production. We shall examine briefly several of the proposals that have been made.

Equality of Income. To some people it seems eminently fair that the total income of the country should be divided equally among the adult

⁷ Edwin Cannan, *Wealth*, London, P. S. King & Son, Ltd., 1924, pp. 183, 184.

members of society. Just as we now grant one vote to every citizen of the United States, so would those who advance this theory of distribution give to every citizen an equal share of the total national income.

This arrangement would have the merit of simplicity, and, if we assume that its adoption would not reduce the national income, it would unquestionably do much to improve the economic status of members of the low-income groups, though of course at the expense of the middle classes and the very wealthy. But there are many who hold that distribution on the basis of strict equality would almost certainly mean a much smaller income to divide; for some persons who now labor long, hard, and skillfully, for the sake of personal gain, would be unlikely to exert themselves so strenuously for an individual reward which in no case could be greater than the pay of a lazy, careless, or incompetent worker. As we shall see a little later, in our discussion of economic incentive, this argument is not necessarily conclusive, but it is one which cannot be ignored.

A second objection is that some posts in the economic world today seem to require higher salaries than a bare equality in distribution would provide, if the duties of these positions are to be discharged efficiently. An important executive, whose work involves mental concentration, may need more ample quarters at home as well as in the plant, better means of transportation, and more expensive food and clothing, than the machine-tender who is employed in the same establishment. To some extent these "extras" might conceivably be granted him as a *perquisite of office* and not a *personal wage*; but it is entirely possible that some of an executive's "needs" that must be met, if he is to be of maximum usefulness in production, are so largely personal in nature and so highly subject to sudden change, that they could be cared for only by placing at his disposal a very considerable fund to be used as he might see fit. And such a fund, of course, would come very close to being a personal wage.

There is the further fact that strict equality in the distribution of income would run counter to the very general feeling in present-day society, that there should be some relationship between a man's contribution to the national "goods heap," and the amount of goods he is allowed to take from that heap. The familiar saying that a worker should be paid "what he is worth," though it may not stand up well under close inspection, yet suggests the prevalence of the notion that some contribute much to production and others but little, and that each should be paid *in proportion to his contribution*. Public opinion, even if it should happen to be mistaken, is a factor that must be reckoned with.

Finally, differences in individual incomes of a given type provide a convenient means of apportioning the agents of production throughout our economic system in such a way as to economize most in the use of those agents which are particularly scarce. We have seen that those agents which are very limited in quantity, and at the same time are much in demand,

command high prices. A high price is, of course, a very effective warning that the productive agents to which it is attached—say, a given grade of labor—should be used sparingly, and only in those places where a more abundant grade of the agent would not serve. Moreover, a high price for labor, or other agent of production, tends to bring about an increase in the quantity of that factor, and thus to overcome its scarcity. In the absence of differences in wages, some other device would have to be set up to insure the most productive use of labor; and this remark is applicable, also, to the apportionment of land and capital among their several possible uses.

Income According to Need. Probably the most nearly ideal principle of distribution that has ever been proposed is the payment of income on the basis of need. Few of its critics have ventured to question the desirability of giving to every member of society an income which would enable him to take care of his needs; but, on the other hand, many have risen up to challenge the feasibility of the plan.

It is said, in the first place, that needs are subjective, and that it is impossible to determine—for every man, woman, and child in the country—just what his or her needs are. Wants might be ascertained readily enough through the simple process of personal inquiry, but probably few persons would hold that a requisition thus drawn up would represent genuine needs and nothing more. However, Professor Hobson⁸ and others would insist that, though needs cannot be ascertained with absolute accuracy, it is certainly possible for experts in diet, housing, and other fields to determine, within fairly narrow limits, what might be termed the legitimate needs of individual members of society—making allowances, of course, for environmental, occupational, and possibly certain other differences as between individuals.

The payment of income according to need presupposes, of course, that everyone would be glad to pitch in and do his share of society's work. Indeed, the slogan in which this principle of distribution is commonly expressed—"from each according to his ability, to each according to his need"—implies that all members of society may be counted upon to contribute generously of their productive power. But it is by no means certain that the principle would work out this way in actual practice. For if all were assured incomes according to their needs, there is at least a possibility that some would not concern themselves greatly about their obligations as producers. Hence, in addition to the difficulty of ascertaining needs, there would be the problem of inducing people to work industriously. Unless this problem could be solved, the national income might not be sufficiently large to meet the needs of society.

Income According to Effort Expended. To some persons it appears grossly unjust that people who labor long and hard sometimes receive very

⁸ Cf. J. A. Hobson, *Work and Wealth*, London, George Allen & Unwin, Ltd., rev. ed., 1933, chap. 11

small pay, while others with short hours and light tasks draw handsome incomes. Would it not be much fairer, they ask, to reward workers on the basis of the effort they expend, giving large incomes to those who exert themselves greatly in production, and small ones to those who work less diligently?

The answer to this query seems to be that society is not, on the whole, interested in having its members work particularly hard, unless by so doing they turn out goods that society wants. Our present method of distribution rewards workers who make goods that are wanted, and pays premiums to those who produce these goods in unusually large quantities. Since what society wants is *goods*, not *toil*, it pays for the former rather than the latter.

This arrangement tends to direct workers into those occupations for which they are best fitted, since it is here that they are best paid. But if incomes were paid on the basis of energy expended, we might easily have an appallingly large number of misfits in the world of production—those who labored exceedingly hard and were therefore well paid, but who nevertheless turned out—because they were in unsuitable occupations—either an inferior product, or a quantity of product that was excessively small in view of the incomes they received. To adopt this principle of distribution would be equivalent, therefore, to encouraging waste in production. It should be added that it would be exceedingly difficult, if not impossible, to measure accurately the amount of energy expended by every worker in society.

Income According to Social Usefulness. Yet another proposal is that income should be based upon the *social* usefulness of the service that is rendered. Under our present system of distribution, it sometimes happens that larger incomes may be had by catering to the whims of the wealthy than by taking care of the genuine needs of the masses. For example, it may be more profitable, from the point of view of personal income, to build pleasure yachts for millionaires than to put up dwellings for poorly paid workingmen. But the dwellings would probably far outweigh the yachts, if judged on the basis of social usefulness. Should we not, then, encourage the production of “first things first,” by rewarding the producers of necessities more generously than the producers of luxuries?

Possibly so, but the difficulties of administering the principle would seem to be well-nigh insuperable. It would involve not only distinguishing between luxuries and necessities—a very considerable undertaking, since what is a luxury for one person might be a necessity for another—but, in addition, drawing up a list of all economic services that are rendered in a modern civilization, rating them in the order of their social significance, and then deciding upon income differentials which would represent accurately their relative importance to society. This is a task of such dimensions that it is almost inconceivable that it could be performed satisfactorily.

Income According to Productivity. We must call a halt on our survey of principles of distribution which might possibly be substituted for the one that obtains in most economic societies today. And, though we have not been able to do full justice to the substitute plans that we have outlined, we feel warranted in suggesting that, all in all, payment on the basis of productivity seems to us to be the best arrangement that has yet been proposed for distributing income—assuming, as we do, the continuance of an economic order in which competition, self-interest, free enterprise, and private property play important rôles.

We have no desire to suggest that this is an ideal principle of distribution. Indeed, we have gone to some trouble to point out certain of its defects. But, in spite of its imperfections, payment according to individual productivity has advantages which we cannot afford to overlook or underestimate. It helps to stimulate workers to do their best, and thus it tends toward the maximization of national income. And it is, moreover, a principle which appeals to most people as fair—for who will contend seriously that a man can rightly claim, as a matter of economic justice, more than he produces, or should be required to accept less? Of course, those who under this system cannot support themselves must be supported by the state—but in the name of common humanity, and not economic justice; and individual incomes, based upon individual productivity, must be taxed so that society may be able to meet this and other legitimate expenses of government.

We are far, then, from proposing an absolute equality of income among the members of our economic order. We believe that the government should undertake to eliminate all anti-social ways of getting income (such, for example, as the exercise of monopoly control, the adulteration of goods, misrepresentation through advertising, and so on), and then encourage every member of society to try to outdo his fellows in *rendering service*—which, as Professor Carver points out, would then be the only means left through which one could hope to get an income.⁹ But, as we said at the beginning of Chapter 27, the problem of economic inequality will not be solved until there is equality of opportunity for all members of society, so far as this can be accomplished through the removal of artificial obstacles to the full development and utilization of personal capacities.

THE CURES FOR ECONOMIC INEQUALITY

The Need for Equality of Opportunity. From what has been said thus far, it will be seen that we do not hold that the abilities of individual members of society are equal, nor do we believe that it is possible or

⁹T. N. Carver, *Essays in Social Justice*, Cambridge, Harvard University Press, 1915, chap. 6.

desirable to attain equality of this kind. Furthermore, we do not contend that incomes should be equal, though we believe the gross economic inequalities that exist today are socially undesirable and must be done away with. That is to say, they must be done away with if we are to have the *equality of opportunity* which is the *sine qua non* of a democratic economic society. For equality of opportunity, as Mr. Tawney has shown, "obtains in so far as, and only in so far as, each member of a community, whatever his birth, or occupation, or social position, possesses in fact, and not merely in form, equal chances of using to the full his natural endowments of physique, of character, and of intelligence."¹⁰ The late Stephen Leacock had the same idea in mind when he insisted "that every child of the nation has the right to be clothed and fed and trained irrespective of its parents' lot." "No society is properly organized," he continued, "until every child that is born into it shall have an opportunity in life. Success in life and capacity to live we cannot give. But opportunity we can. We can at least see that the gifts that are laid in the child's cradle by nature are not obliterated by the cruel fortune of the accident of birth; that its brain and body are not stunted by lack of food and air and by the heavy burden of premature toil. . . . If, with all our vast apparatus of machinery and power, we cannot so arrange society that each child has an opportunity in life, it would be better to break the machinery to pieces and return to the woods from which we came."¹¹

Limitations on Inheritance. A little thought suggests that equality of opportunity cannot be achieved so long as huge accumulations of wealth are passed on from generation to generation in the form of bequests from certain individuals to others. Hence, the first requirement of equality of opportunity would seem to be a thoroughgoing federal estate tax, to prevent the inheritance of large fortunes by individuals and insure their use in the interests of all. If this tax is to do its full share in reducing inequalities, it must take a large proportion of great estates, leaving only a moderate provision for direct dependents, instead of the enormous bequests that have sometimes placed the children of the wealthy hopelessly in advance of those whose parents have had no property to bestow.¹²

There is much to be said for shuffling the cards between deals, and for

¹⁰ R. H. Tawney, *Equality*, New York, Harcourt, Brace & Company, Inc., 1931, p. 125.

¹¹ Stephen Leacock, *The Unsolved Riddle of Social Justice*, New York, John Lane Company, 1920, pp. 138-140.

¹² Of the \$16,000,000 fortune left by the late J. P. Morgan, who died in 1943, the federal tax took \$7,384,309 and the New York State tax \$2,064,414, or a total of nearly 60 per cent of the entire estate. (*The New York Times*, March 7, 1947.)

To the wealthy, such taxes must seem to be already unduly high. However, these estate and inheritance taxes may be assumed to reflect the views of the American people, as expressed through their elected representatives, and may go even higher—though any such move, if it is not to defeat its purpose, must take into account the possibility that excessively high rates *might* interfere with the incentive to accumulate large fortunes, and hence with productivity, as we note later in the chapter.

having all the runners in a race start from the same point. It is equally important that contestants in the race of life shall have an even start, so far as the elimination of artificial obstacles is concerned. If the inheritance of income-producing property were very greatly restricted, we should at last have a chance to judge fairly the qualities of the racers—something we can never hope to know under a system that often penalizes the weak and favors the strong. It is scarcely necessary to add that an estate tax, if it was not to be evaded, would have to be accompanied by a gift tax which would prevent the transfer of property in anticipation of death, or would at least tax such transfers at a high rate.

So far as the recipient is concerned, inheritance is obviously unearned income; and this fact may account in large part for the willingness of legislatures, both state and federal, to impose upon such income the fairly stiff tax rates that are noted in our discussion of taxation in Chapter 44 (Volume 2). If our lawgivers should see fit to impose even higher inheritance and estate taxes, they would by so doing provide a larger degree of equality of opportunity than now prevails, by still further weakening the institution of inheritance, the functioning of which is (as we have said) a major cause of economic inequality.

Permanently High Income Taxes. In addition to preventing the inequalities of one generation from being passed on to the next, something should be done to reduce inequalities even in the short run. It seems to us entirely fitting and proper that the wealthy—even those who have gained their wealth through their own efforts and not by inheritance—should be asked to pay a very large part of the running expenses of society. We propose, in this connection, a system of federal income taxes with *permanently* high rates in the high-income brackets.

Just how high these rates should be, we are not prepared to say. This is a matter to be determined by experiment. But our use of high personal income taxes in wartime indicates that our *peacetime* use of income taxation has by no means exhausted our possibilities of securing revenue through this agency. Surtaxes in the United States reach a maximum of 88 per cent on portions of individual incomes that exceed \$200,000—but these are, of course, relatively few. Experience in England and other countries seems to indicate that we might well adopt permanently high rates in certain brackets, somewhat along the line of the supposedly *temporary* increases that were adopted to aid in financing our war needs.¹³ Such rates, to be “fair”—that is, in accord with the principle of ability to pay¹⁴—would have to be steeply graduated, taking only a small percentage of low incomes but a large percentage of those running into the

¹³ We are unlikely, however, to go to such extremes as the legislators of England, where (in 1947) the tax on an individual's income *in excess of* \$80,000 was 97½ per cent.

¹⁴ See chap. 44. The relative merits of various kinds of taxes are discussed in that chapter.

hundreds of thousands or millions, though not so large as to deter persons of unusual ability from engaging enthusiastically in productive enterprises. Moreover, they should be so arranged as to lay a particularly heavy toll upon "unearned" incomes—those derived from the ownership of property—while dealing more gently with wages and salaries, since the latter represent a payment for personal services. To prevent evasion of the income tax, there would be need, of course, to eliminate all tax-exempt securities.

The Question of Incentive. It must not be supposed that a permanent tax program of this kind could be put into effect without meeting considerable opposition. Once it was publicly proposed, prophets would rise up and proclaim that a very high income tax would eventually destroy incentive, while a very high estate tax would both discourage production and lead to wasteful spending. But these are matters about which we know little or nothing from actual experience, so that these prophets, being on uncertain ground, would do well to tread softly. In the past, it is true, we have depended chiefly upon the lure of material gain to induce men to do their utmost in the field of production. But it is entirely possible that, in our worship of material things, we have overlooked other incentives that would prove equally potent, if only we brought them into play.

Indeed, there are many callings—such as the military and diplomatic service, and the so-called professions—in which some non-material incentive, such as the desire for authority or prestige, an interest in the work, or the feeling that this task or that is particularly worth while, appears to be a force sufficient to impel men to pursue their occupations with earnestness and enthusiasm. It seems inevitable that, in a society which to a large extent has eliminated economic inequalities, the economic motive would lose much of its power, giving way to other motives that might prove equally productive of economic goods though less productive of human misery.¹⁵

But this is frankly a field of speculation, with one man's guess about as good as another's. It may be true that an estate tax such as we have proposed would lessen men's desires to work and thus reduce their productivity, or cause them to spend their accumulations before making their final exit. On the other hand, it is equally possible that our captains of industry and merchant princes are more intent upon establishing reputations as leaders in their respective fields than upon establishing fortunes to be handed down to their descendants. The effect of high income taxes upon production is likewise debatable. Some persons believe that such taxes lessen incentive, while others are equally certain that they increase it. The latter argue that if a business man has set \$20,000 as the amount needed to buy a satisfactory standard of living, the imposition of a 50

¹⁵ Readers who are interested in the question of industrial motives should consult J. A. Hobsqn, *Incentives in the New Industrial Order*, New York, Thomas Seltzer, 1925; and Paul H. Douglas, "The Reality of Non-Commercial Incentives in Economic Life," in Rex G. Tugwell, Editor, *The Trend of Economics*, New York, Alfred A. Knopf, Inc., 1924.

per cent income tax might spur him on to greater deeds, since he would then need a gross income of \$40,000 in order to have the use of a net income of \$20,000, the amount formerly available for spending.

But even if the prophecies of reduced production should be fulfilled, society instead of losing might still be the gainer. For the goal of production is the satisfaction of human wants, and a small volume of economic goods, well distributed, might easily give more satisfaction than a larger volume concentrated in the hands of the few. All in all, then, there is no conclusive evidence that very high rates of taxation on exceedingly large incomes or inheritances would reduce society's output of commodities and services, or that this reduction, if it should come to pass, would necessarily mean a loss in social welfare.

The Extension of Social Services. The permanent adoption of steeply progressive taxes on inheritances and personal incomes would do much to reduce economic inequality, and at the same time produce an enormous amount of revenue. One of the uses to which such revenue might well be put is an extension of the social services.

We have already examined¹⁶ various forms of social insurance, and the provision of free medical and hospital service for all who need it. Here, surely, is plenty of scope for spending advantageously a considerable part of the revenue of which we are speaking. With the hazards of unemployment, accident, sickness, and old age taken care of, one of the most serious consequences of economic inequality—the worry and hardship of economic insecurity—would be virtually eliminated. Another—the lack of educational opportunity—could and should be removed through such an expansion of our facilities as would give every boy and girl, man and woman, as much training as he or she is able to absorb. This educational program, of course, would involve not only free tuition in the elementary and secondary schools and higher institutions, but also such allowances for living expenses as would make it unnecessary for the members of working-class families to quit school from lack of funds. In this way our “free” education could be made genuinely free. We have already noted the desirability of having public defenders as well as public prosecutors in our system of legal justice. It seems necessary to have, also, a legal advising service, provided by the state, from which any person in legal difficulties would be able to secure expert assistance in the conduct of his case; and this assistance would have to include appeals to the higher courts without cost. Otherwise, there can be no justice worthy of the name.

Conclusion. It will be recalled that we began our discussion of economic inequality with a plea for a readjustment of social conditions that would insure “equality of opportunity for all members of society, so far as this can be accomplished through the removal of artificial barriers to the full development and utilization of personal capacities.” We have indicated measures which socially-minded persons have proposed for insur-

¹⁶ In chaps. 25 and 26.

ing a fair degree of equality in the way of economic security, educational opportunity, and legal justice. With an increase in the number and importance of the functions performed by the state through the extension of social services, we should expect our citizens to manifest a greater interest in the control of government than they have shown in the past. This increased interest, combined with a reduction in the economic power of our "big business men," should weaken somewhat the hold that these "actual rulers" have upon the affairs of government. We do not suggest that the proposals here outlined for taxation and social services would bring equality in income or standards of living, but they would unquestionably do much to reduce the most glaring of present inequalities. And we do believe—and this is the most important item of all—that this program would establish a substantial degree of equality of opportunity, so that such inequalities as continued would be the result of differences in native endowments and not differences in environmental conditions.¹⁷

In suggesting means for bringing about an increase in economic equality, we have limited ourselves to recommendations which we are convinced could be worked out *within the framework of a capitalistic economy*, as described in Chapters 4 and 17. Indeed, we hold that the proposals we have outlined, far from weakening the present economic order, would do much to strengthen it. The best possible safeguard of a given type of social system is the feeling, on the part of its members, that it is essentially fair. Properly administered, our program for providing equality of opportunity should appeal strongly to the pronounced individualistic leanings of the average American, and (assuring him of a chance to develop his personal abilities to the utmost, and to sell the fruits of his labor in a competitive market) give him a new stake in a revived system of free enterprise from which artificial obstructions had been removed.

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1. "All men are created equal." Examine this statement critically.
 2. Compare the views of James A. Garfield and Julius Rosenwald on the subject of "luck."

¹⁷ The adoption of this program would not, of course, make up for such serious personal deficiencies as physical invalidism or feeble-mindedness. Hence, to repeat a statement made in chap. 26, "it is probable that there will always be some members of society who, because of physical or mental defects, cannot be expected to support themselves. Unfortunates of these kinds will have to be cared for at the public expense, unless they have friends or relatives who are able to look after them adequately." We believe that such persons should be provided with a standard of living that will enable them to live in health and decency, but that they should be prevented from propagating their kind. It is often suggested that, if their defects are of a transmissible type, these public charges should be required (in return for their maintenance) to submit to segregation or sterilization, since society cannot afford to have an increase in the numbers of those who, even under conditions of approximate equality of opportunity, are so lacking in ability as to be unable to provide for themselves.

3. "The notion that genius, like murder, will 'out' is a false sentimentalism," says Professor Hobson. Comment.
4. What, according to Professor Hobson, are "the conditions of the successful utilization of genius"?
5. Explain the significance of Professor Pigou's statement, "Environments, in short, as well as people, have children."
6. "Talent and energy can create opportunity. But property need only wait for it," says R. H. Tawney. Precisely what does this mean?
7. Professor Taussig says that inheritance "explains the great continuing gulf between the haves and the have-nots." Discuss.
8. Show, by reference to the Astor fortune, the possibilities of increasing wealth through inheritance.
9. Why should inheritance have a slighter influence upon economic inequality in newly settled countries than in older countries?
10. Comment on the significance of the old saying, "It is only three generations from shirt-sleeves to shirt-sleeves."
11. Discuss equality of income as a principle of distribution, stating its advantages and disadvantages.
12. "From each according to his ability, to each according to his need" is a slogan that has been used by certain collectivists. Some people say it would not "work out." What is your opinion, and why?
13. "Those who work hardest should get the largest incomes." Comment.
14. It is suggested in this chapter that the government should undertake to eliminate all anti-social ways of getting income. Give examples of income-getting that might be regarded as anti-social.
15. What is the meaning of equality of opportunity, as proposed in this chapter, and why should we seek to attain such equality?
16. What part might taxation play in bringing about equality of opportunity?
17. Might we not destroy economic incentive, if we should undertake seriously to provide equality of opportunity for all? Explain.
18. Distinguish between "economic inequality" and "economic insecurity."
19. Examine carefully the implications of the term "free education."
20. Even though perfect equality of opportunity should be attained, there would still be some members of society who were unable, because of personal shortcomings, to earn a satisfactory living for themselves. What should society do about such persons?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 27.

The Principles of Consumption

CONSUMPTION IS THE GOAL OF PRODUCTION—MAN MAKES ECONOMIC GOODS IN order to have them available for use in the satisfaction of his many wants. Of the multiplicity of human wants and the difficulty of fulfilling them because of the scarcity of goods, we had much to say in Chapter 2; and in the chapters that followed we have dealt with some of the complicated processes through which economic goods come into being, are evaluated, and eventually are divided among those persons who have provided society with the agents of production—land, labor, capital, and business enterprise. Having spent a considerable time examining the operation of our productive system, and noting, as we have proceeded, some of its major defects as well as its very considerable merits, we shall venture, in this chapter and the next, into the field of consumption, toward which we have been marching through some hundreds of pages.

The Meaning of Consumption. In much of our discussion we have talked about producers' goods, or capital, but we now center our attention upon consumers' goods, which we defined in Chapter 3 as produced goods in the possession of the persons by whom they will be used in the direct satisfaction of wants. Consumption consists of the utilization of goods which answer this description, and of the non-material goods which we call services. Producers' goods, too, are *utilized*, but utilization of this kind is production, not consumption. When a baker uses his oven to make a loaf of bread, he engages in an act of production; but when a hungry man uses the loaf to satisfy his craving for food, his is an act of consumption. The baking of the loaf—production—makes possible the appeasement of hunger—consumption; the former is the means, the latter the end.

"Neglect" of Consumption by Economists. In view of the obvious importance of consumption, it may seem strange that we have allotted but two chapters—less than four per cent of the total number in the present work—to its treatment. This, however, is more space than is commonly given to a consideration of consumption in economic textbooks. Professor Hobson, whose writings have shed much light upon this branch of economic thought, has commented upon the subordination of consumption to production in the works of writers on economics. "When the products of industry pass over the retail counter, economic science almost loses count of them," he says. "They pass from sight into the mysterious maw

of 'the consumer.' It has never occurred to the economist that it is just as important to have a clear and close knowledge of what happens to products when they have become consumers' goods, as it is to trace their history in the productive stages."¹

There is unquestionably something of justice in this observation, but it must be added that the seeming neglect of consumption by writers on economics has not necessarily resulted from a lack of appreciation of its significance. The truth of the matter is that there is surprisingly little that can be said about consumption in an exact way; and many writers have preferred to write but sparingly, or not at all, on a subject which does not lend itself readily to scientific treatment.

The fruits of production are economic goods, which are objective and measurable; but the fruits of consumption are human satisfactions, and are therefore subjective, variable as between individuals, and largely incapable of measurement. Nevertheless, consumption is a vital process, there are things that can and should be said about it, and—having warned the reader that the subject is not, in general, reducible to exact principles—we shall proceed to say them.

THE CHOICES OF CONSUMERS

The wants of people are made effective, in a price economy such as ours, through the medium of demand; for demand, from the individual's point of view, is the expression of his wants, backed up by purchasing power. But human wants are many, and goods are scarce. Relatively few persons have money incomes sufficiently large to permit them to satisfy all of their wants in the way of economic goods. Consequently, most people must go without some of the goods they would like to have; and this means that decisions, or choices, are continually being made by all who exercise their function as purchasers of consumers' goods.

The Basis of Consumers' Choices. Just why people choose to buy certain commodities and services rather than other goods that are available, is a question we cannot pretend to answer, except in the most general terms. It is probable that most choices are made in the hope of maximizing the satisfactions that can be had through the expenditure of a given money income—and this is an idea that we shall develop in some detail a little later in the present chapter. To this statement we may add Professor Hobson's reflection to the effect that three factors—environmental, industrial, and conventional—influence powerfully the choices that people make in spending their money, and that the environmental and industrial influences are more largely productive of wise choices than are conventional influences.

But having said this, we can scarcely claim to have given an adequate

¹ J. A. Hobson, *Work and Wealth*, New York, The Macmillan Company, 1926, p. 6.

explanation of consumers' choices. Indeed, most economists have abandoned hope of finding a completely satisfactory explanation, at least for the present. The truth of this statement is evident in the usual treatment of value theory. In explaining how the price of an economic good is determined, it is customary to assume a condition of demand and to proceed upon that assumption, without undertaking to explain the consumers' choices that have combined to bring about the given condition of demand. We are not criticizing this procedure. On the contrary, we commend it; for human motives in the field of consumers' choices, as in other fields, are difficult if not impossible to fathom; and it is surely the part of intellectual honesty to admit the fact frankly. There can be no objection, of course, to listing (as some writers do) the factors which may *possibly* play a part in affecting consumers' choices.

The Regulation of Consumption by Prices. Of the effect of one such factor—price—we can speak with considerable assurance. For however much a person may desire a certain good, and for whatever reasons, he cannot make his desire effective, and thus convert it into a consumer's choice that has significance, unless he is able to pay the price which sellers insist upon getting. The high price of many an economic good puts it quite beyond the reach of most members of society. Moreover, a change in the price of a commodity or service that is in very common use will also affect the amount that is consumed.²

Consumption, then, is very largely regulated by prices, and the influence that prices exert is, of course, one which tends to encourage the consumption of a good which is plentiful and discourage the consumption of one which is scarce. In these ways, prices exercise a stabilizing influence over consumption, spreading out the available quantity of a given good fairly smoothly over a period of time, and thus avoiding seasons of great scarcity or glut. A similar point was made in connection with our discussion of speculation, in which we noted that the operations of professional speculators lead, among other things, to a greater stability in both the use and price of the commodity in which they deal.

Our price system provides a sort of automatic regulator of social consumption which, in the interests of stability, would have to be replaced by an arbitrary control if the present economic order should ever give way to one which lacked a system of prices related to scarcity.

Consumption, the Guide to Production. How do business enterprisers know what goods to produce, and in what quantities? Shall they turn out less clothing and more food? If so, shall they increase the output of meat or cereals? And if the former, shall the increase take the form of beef, pork, or mutton? These and similar questions by the thousands must find answer day by day in our economic order. And—with certain ex-

² See, in this connection, chap. 12.

ceptions which will be dealt with in the next chapter—the answers must come from consumers.

For, in the final analysis, it is the consumers who tell the enterprisers what to produce, and what not to produce. Since consumption is the goal of production, the goal is not reached unless and until the commodities and services turned out are acceptable to and accepted by the consumers. Economic goods are commonly produced in anticipation of demand, and if, when they appear on the market, they do not appeal to the prospective consumers, the expected demand will fail to materialize. That way, as enterprisers know, lies bankruptcy. And so, though some rash souls produce goods with the thought of bulldozing the public into buying, by far the larger number of producers keep an ear to the ground, listening intently for word of what the consumers are likely to buy.

In the case of well-established commodities and services, this information is not particularly hard to get. Consumers' choices lead to a steady demand, year after year, for many kinds of goods. This is especially likely to be true of staple items, in which there is but little scope for the expression of individual taste. But in some fields of consumption have come changes in demand almost revolutionary in their nature, so sudden have they been and so widespread their consequences. In the commercial theater, for example, during the past quarter-century, the "legitimate" drama and vaudeville were almost wholly supplanted by silent pictures, and these in turn gave way to the "talkies." Where, we might ask, are the blue serge suits so popular among the men of two decades ago? And what has become of the miniature golf courses that dotted the landscape from coast to coast in the late nineteen-twenties? They have, of course, gone the way of all economic goods that fall into disfavor with that court of last resort—the consumers. Only so long as people continue to buy, can enterprisers continue to produce.

Far-Reaching Effects of Consumers' Choices. Whether people buy or refuse to buy may have important economic consequences. When there was a radical change in feminine coiffures a number of years ago, some thousands of Orientals lost their means of livelihood because of the decline in the demand for hair nets. And when women turned from high to low shoes, which required only a fraction as much leather in their manufacture, this change in consumers' choices was felt in businesses that apparently had little or no connection with the shoe industry. It resulted, for example, in higher prices for house-plastering! For the lessened demand for leather led to a smaller production of goats; this in turn reduced the quantity of goat hair available for use in the plastering trade; and this decrease, in the absence of any change in demand, raised the costs of production in house-plastering, and brought a price advance in this branch of the building industry.

Indeed, it is almost inevitable that every change in consumers' demand

will be felt somewhere—probably fairly near at hand, but possibly on the other side of the globe—in the field of consumption or production, or both. If the demand for a consumers' good declines, the money formerly spent for it is likely to be used to buy other kinds of consumers' goods, and they of course will experience an increase in demand. This means a shift in the agents of production; for land, labor, capital, and business enterprise tend to move about continually, shifting from declining industries to those which for the moment are expanding. We saw, in our study of technological unemployment,³ that the shift of labor is not always easily made, and that genuine privation may result when industrial workers are cast aside. Capital, too, is often difficult to transfer, for much of our industrial machinery is highly specialized, and is useless for any purpose other than the one for which it was designed. By way of casual illustration, we may note that the sudden change from silent to "talking" pictures meant the scrapping of huge quantities of specialized capital, and the purchase of new equipment of a different kind, on the part of both the producers of films and those who exhibit them to the picture-loving public. As one writer has said, "business has wings" and its movements in some fields are exceedingly erratic. But this would seem to be a natural and unavoidable situation so long as consumers are free to choose what they will buy, and more particularly in those countries in which many people have incomes sufficiently large to enable them to consume luxuries.

We are not, on this account, suggesting that the consumers' freedom of choice should be curbed. We feel that, in general, the consumer is in a better position than anyone else to direct the expenditure of his money income. This statement should be qualified by the observation that society owes it to its members to give them as much assistance as possible in arriving at wise decisions; and we shall develop this idea somewhat in the following chapter. But we hold to the view that the consumers' power to accept and reject has aided in the development of many genuinely useful commodities and services; and it seems probable, further, that the satisfaction experienced in the consumption of a good may be enhanced by the fact that the good was chosen freely by the consumer, and not thrust upon him by another.

INDIVIDUAL AND SOCIAL MAXIMIZATION OF SATISFACTIONS

Since production is the creation of utility, and consumption is the goal of production, it follows that production comes closest to realizing its full possibilities when real income is so constituted as to bring about the maximization of satisfactions.

A Note on the Principle of Diminishing Utility. It is scarcely possible

³ In chap. 25.

to talk intelligently about the maximization of satisfactions without reference to the principle of diminishing utility, which we discussed in our treatment of the Law of Demand.⁴ The principle was there stated as follows: The intensity of a person's desire for a unit of a given good diminishes progressively as additional units of this good are acquired. Since we use the words "utility" and "desiredness" interchangeably,⁵ we are justified in restating the principle of diminishing utility in these words: *The utility of a unit of a given good diminishes progressively as additional units of this good are acquired.*

In the interests of strict accuracy, we must again note a point which was made in Chapter 12—that the buyer of a good may find, upon consuming his purchase, that his advance calculations were faulty; that he has received less, or more, satisfaction from the good than he anticipated; and that, though the price paid unquestionably measures the *marginal utility* of the good (since otherwise he would not have bought it), it does not, in the strict sense of the term, measure accurately the *satisfaction* derived from consuming it.⁶ But having made this explanation, we shall proceed for the present to disregard the distinction between utility and satisfaction. For we concur in Professor Pigou's view that, in general, "not much harm is likely to be done by the current practice of regarding money demand price indifferently as the measure of a desire and as the measure of the satisfaction felt when the desired thing is obtained."⁷

Individual Maximization of Utility. Applying now the principle of diminishing utility to the expenditure of a money income, we suggest that in order to derive the maximum utility obtainable from the use of a money income the spender must distribute his purchases so that the marginal utility of the last dollar spent for one kind of good will equal exactly the marginal utility of the last dollar spent for every other kind. That is to say, there must be an equalization of marginal utilities in all of the several fields of expenditure. We may illustrate the point by use of a hypothetical illustration, which has been drawn up with some regard for the estimates of budget-makers who have studied the actual expenditure of wages in the low-income groups.

Let us assume, then, that a certain laborer receives a wage of fifteen dollars a week. In the case of a very small income, it is exceedingly important that it shall be made to go as far as possible—for there is no room here for waste. This means that the laborer must act in accord with the principle of diminishing utility—paying strict heed to its implications—for in no other way can he hope to maximize the utility that is obtainable through the expenditure of his exceedingly modest wage.

⁴ See chap. 12.

⁵ P. 37.

⁶ Cf. p. 200.

⁷ A. C. Pigou, *The Economics of Welfare*, London, Macmillan & Company, Ltd., 1929, p. 24.

To this end, he must watch carefully the expenditure of every dollar. He must never spend a dollar for a good, if a dollar's worth of some other good holds greater utility for him. Let us examine, for a few moments, Fig. 38, which illustrates graphically the expenditure of the laborer's weekly wage of fifteen dollars. For the sake of simplicity in explanation, we have assumed that there are but five possible fields of expenditure in the economic order in which this laborer lives—that is,

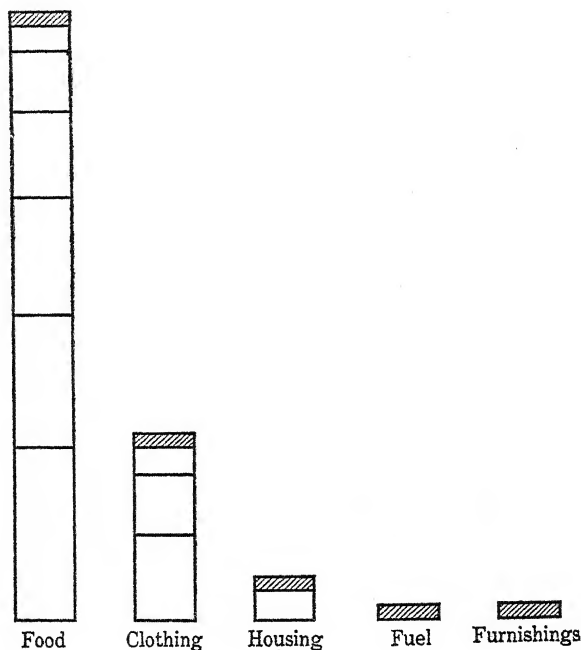


FIG. 38. THE EXPENDITURE OF A MONEY INCOME.

The diagram illustrates the operation of the principle of diminishing utility. The shaded portions of all five columns are of equal size, showing that this distribution of money income has resulted in the equalization of "marginal utilities" essential to the maximization of utility in the expenditure of a given money income.

he may buy only food, clothing, housing, fuel, or furnishings. Each of the spaces marked off in the five columns shown in Fig. 38 represents the utility of a single dollar's expenditure. In the "food" column, for instance, there are seven spaces, the largest at the bottom and the smallest at the top. This gradual decline in size is intended to show that the principle of diminishing utility is operating in the laborer's purchase of food. If the diagram pictures the situation accurately, the utility of the seventh dollar's purchase of food is substantially less than that of the first dollar's

purchase in the same field. The "clothing" and "housing" columns also indicate the workings of the principle of diminishing utility.

It is obvious that a minimum of food, clothing, and housing is essential to survival itself. But beyond the point of bare subsistence, there is considerable scope for the exercise of freedom of choice. The diagram suggests the relative importance of the several kinds of economic goods to the fifteen-dollar-a-week laborer, for it shows that he spends seven dollars of the fifteen for food, four dollars for clothing, two for housing, and one each for fuel and furnishings. The utility of the seventh dollar's worth of food is shown to be the same as that of the fourth dollar's worth of clothing, and of the second dollar's worth of housing. In each of these three fields, the utility of the marginal dollar's purchase is indicated by the small shaded area, and since these areas are equal the marginal utilities are likewise equal.

If the laborer is to get the maximum of utility to be had from spending his fifteen dollars, he must distribute his expenditures in the manner shown in the diagram. This is necessarily the case, for this is the one and only distribution which will bring about the equalization of marginal utilities in all of the five available fields of purchase. If the marginal utility of a dollar of expenditure in one field (say, food) should be less than in any other (say, clothing), this situation would suggest the desirability of spending less on food and more on clothing—of using the seventh dollar (or a part of that dollar) to buy clothing instead of food. If the maximization of utility is to be realized, dollars (and possibly quarters, dimes, and pennies) must be moved about in search of utility, and nothing must be spent for any type of good whatsoever if its expenditure elsewhere would mean greater utility for the spender. Hence, we arrive eventually and inevitably at an equalization of marginal utilities, such as is indicated by the five shaded areas in Fig. 38; and until this equalization takes place there can be no maximization of utility.

The deliberate weighing of utilities is continually going on. There are doubtless a few persons whose swollen incomes make it unnecessary to consider seriously whether to make a given purchase or not. But income-getters of this class are clearly a very small fraction of society as a whole. Even to those who are exceedingly well off, there sometimes comes the necessity of choosing between a new motor car and a summer cruise. For the school teacher, it may be a matter of seeing *Hamlet* or buying a new necktie, since he cannot at the moment afford both. And in the very lowest of wage groups, the question may be one of buying a newspaper or indulging in an extra pipe of tobacco, so meager are the incomes of millions of workers in our present-day society.

We are not suggesting that all consumers' choices are made on a calmly calculated, "rational" basis, for this is far from being the case. The extra cost of taking a friend to lunch, or having medical attention for

a common cold, is incurred by a good many members of society, without giving the matter a second thought. Their incomes are so large that this unexpected expense does not mean retrenching along some other line. But for every person who is in comfortable financial circumstances, there are hundreds or thousands who must pinch the pennies in order to make ends meet. To these members of "the masses," the maximization of utility is a matter of the utmost importance; and it can be attained only by following the sort of procedure that we have described. It must be admitted, however, that even those who have appallingly low incomes often fail to maximize utility, because of ignorance, carelessness, misleading advertising, and other causes which will receive attention in the following chapter.

Present and Future Consumption. Another choice that consumers must make is whether to have their consumers' goods now or in the future. Though they cannot eat their cake and have it too, they may, by delaying consumption for a time, enjoy a somewhat larger slice than would be theirs if they declined to wait. By spending only a part of their money incomes for consumers' goods, and investing the remainder, either directly or indirectly, in capital, they are enabled to receive at a later date, in the form of principal and interest, a larger amount than they invested. And this, of course, means a larger quantity of consumers' goods than could have been bought with the sum originally saved, if no rise in the price level has taken place in the period during which the savings were lent out.

In general, present goods appeal more strongly to income-getters than future goods. Indeed, our current theory of interest is based upon this assumption.⁸ A few persons, the very wealthy, are not required to make this choice. Just as they need not decide whether to buy *this* present good rather than *that*—since they can afford both—so, too, they are relieved of the necessity of choosing between present and future goods—for their ample financial resources insure them an abundant supply of consumers' goods in perpetuity. But ordinary mortals are continually answering the momentous question—to save or not to save—as we have already seen in our discussion of interest in Chapter 22. The motives that influence these decisions, like most motives back of consumers' choices, are clothed largely in obscurity. Some people are undoubtedly saving against old age, and an anticipated inability to earn current income at that future time; others are trying to insure a good education for their children; while for millions of savers the dismal objective is merely the provision of a decent burial when the saver must make his final exit. In many instances, of course, it is probable that the prospect of interest leads to saving.⁹

But we are here concerned not so much with the causes as with the results of saving. To a considerable extent, economic progress is built upon the accumulation of capital, and the large volume of savings in the

⁸ See chap. 22.

⁹ As is explained in the discussion of "time-preference" in chap. 22.

United States—amounting at times to as much as fifteen billion dollars in a single year—has doubtless contributed greatly to American economic development. We have benefited greatly, then, because some people have chosen future instead of present goods. However, this choice is not always a blessing. Professor Hobson, for example, has challenged sharply the social usefulness of thrift, in so far as it results in saving instead of spending among those who have very small incomes.

Saving that means a milkless diet for children, clothing that fails to protect the wearer adequately against inclement weather, and the neglect of physical ailments or their treatment with patent medicines, may be very costly saving indeed, both individually and socially. Professor Hobson concludes that not only should the low-income groups not be encouraged to save, but they should definitely be discouraged from doing so. "No part of the economically necessary fund of annual capital ought to be drawn from this sort of saving," he says. "It is literally a coining of human life into instrumental capital, and the degradation of the word 'thrift' in its application to such saving is a damning commentary upon the false standard of social valuation which endorses and approves the sacrifice. The great risks of loss which actually attend such saving, and the heavy expenses of the machinery of its collection and administration, aggravate the waste."¹⁰

The total volume of such savings in the United States is, after all, relatively small, and their absence would scarcely be noticed. In the prosperous year of 1929, the aggregate savings of the people of this country amounted to 15.1 billion dollars. The upper 10 per cent of the families that contributed to these savings (those with incomes of \$4600 or more) saved 13 billion dollars, or 86 per cent of the total. The upper 20 per cent of families (including all whose incomes were at least \$3100) saved 14.8 billions, or 98 per cent of the total amount. It follows that the savings of the remaining 80 per cent of the population amounted to only 2 per cent of the total American savings for that year.¹¹

Though \$3100 a year will strike many readers as being a very small income, it seems likely that this amount would ordinarily permit of some slight saving without involving the saver in any of the human costs of accumulating capital to which Professor Hobson objects so strenuously. And since 98 per cent of the country's saving is done by families having incomes of at least \$3100, we may well ask whether it might not be socially desirable to try to confine saving to such income groups, in view of the considerable sacrifice with which savings must be effected if they are made by persons who find themselves still lower in the income scale. Of course, any deliberate discouragement of saving among those having exceedingly

¹⁰ J. A. Hobson, *Work and Wealth*, p. 105.

¹¹ Maurice Leven, Harold G. Moulton, and Clark Warburton, *America's Capacity to Consume*, Washington, The Brookings Institution, 1934, p. 96.

small incomes would have to be accompanied by social provision for such persons in time of unemployment, sickness, old age, or other periods of dependency. But it may be added that the inability of the poorly paid to provide for such emergencies—however earnestly they may seek to do so—is now generally admitted; and the need for and justice of social provision in such cases are steadily winning wider recognition.¹²

Social Maximization of Utility. We have seen that the individual who fails to maximize the utility that is obtainable through the expenditure of his money income is, economically speaking, doing less well than he might do. So also, some persons believe, is the society that fails to distribute its income among its members in such a way as to attain the maximization of utility. For (runs the argument) if it is good economics for an individual to seek the maximum of satisfaction in consumption, it should be equally good practice for a society.

The social maximization of utility would demand that, in the distribution of society's money income, no dollar should go to any person if greater social utility would be had through its going to another. With the money income so distributed, and with the members of society striving earnestly to maximize the utility obtainable from the expenditure of the individual incomes then in hand, the available land, labor, capital, and business enterprise would naturally gravitate to the points where they were most needed. Thus, these agents of production would be allocated among the various industries in such a way as to bring forth those commodities and services which, when purchased by individuals with their money incomes, would lead to the maximization of utility for society as a whole.

But a society that followed this practice would be quite different from the one that we know today. It would, as a matter of course, be one from which wildly extravagant purchases would be outlawed—a society in which \$60,000 sable coats, \$1,000,000 “coming out” parties, and \$5,000,000 private yachts¹³ would have no place. The enforcement of the principle of the maximization of utility might conceivably make the following substitutions for the three unusual expenditures noted above: For the \$60,000 sable coat, two thousand woolen coats at \$30 each; for the \$1,000,000 “coming out” party, four million loaves of bread at 10 cents, and four million quarts of milk at 15 cents; and for the \$5,000,000 private yacht, one thousand small houses at \$5000 each.¹⁴ It is hard to believe that substitutions such as these would not increase the sum total of social utility.

Of course, a thoroughgoing adoption of this principle would change our habits of consumption almost beyond recognition. The rule of “first

¹² The problems of economic insecurity were dealt with in chaps. 25 and 26.

¹³ Cf. p. 512.

¹⁴ These figures are based on “normal” conditions, and not on the inflated situation which followed World War II. In 1947, for example, the prices would have been much higher, and the quantities much lower, than are suggested above.

things first" would apply throughout society, and its application would mean the elimination of many of the commodities and services which wealthy and upper middle classes now regard as necessities, but which to the so-called working class appear to be great luxuries. Indeed, a serious and sincere attempt to achieve the social maximization of utility would unquestionably wipe out all extreme inequalities of income; according to some writers, it would probably result (in the interests of ease in administration) in strict equality in distribution; and in any event it would doubtless come close to distributing "to each according to his need"—which, though not at all to the liking of most members of the high-income groups of today, might find defense on economic grounds, and perhaps on ethical grounds as well.

An increase in social utility would mean an increase in social welfare, but, as we have intimated, there are many who would object to increasing social welfare by taking from the rich and giving to the poor; and yet this is the process through which, directly or indirectly, the maximization of utility would have to be effected. Some people hold that the rich are public benefactors—that they endow libraries, art galleries, and medical schools, and that their extravagant spending is beneficial rather than harmful because it provides the poor with work. We have dealt elsewhere with this latter contention,¹⁵ and shall merely observe at this point that the construction of \$5,000,000 worth of workers' dwellings may provide quite as much employment as the building of a \$5,000,000 yacht. As for endowments, there is something to be said for securing through taxation whatever funds are needed for purposes of public health, culture, and education, rather than depending upon the generosity of wealthy philanthropists for gifts which sometimes fail to materialize.

The Possibility of Attaining Social Maximization of Utility. There are many people who applaud individual attempts to maximize utility, but are dead against maximization of utility for society as a whole. These objectors, if pressed for an explanation, will frequently admit that, though *theoretically* they favor society's consuming to the greatest advantage the commodities and services it produces, *practically* they cannot endorse a scheme which would take from the rich and give to the poor. Since the social maximization of utility in consumption cannot possibly be achieved without a redistribution of income, it is evident that the interest of these people in social maximization is purely academic.

There are others who would withhold their support from any movement proposing the social maximization of utility, not on the basis of a sentimental attachment for things as they are, but because they feel that the goal is impossible of attainment. Human beings, they urge, differ widely in their make-up, ranging all the way from the genius in the field of science, art, or business, down to Edwin Markham's man with the hoe

¹⁵ See footnote 19 on p. 512.

—"a thing that grieves not and that never hopes, stolid and stunned, a brother to the ox." How, they ask, can society hope to measure individual capacity to derive satisfaction from the consumption of commodities and services, on the part of people whose heredity and environment vary so greatly; and how, unless this is possible, can society expect to maximize utility in consumption?

The question is a fair one, and one to which, unfortunately, we do not know the answer. However, it may be suggested, by way of partial reply, that the inability to do a job perfectly does not mean that it should not be done at all. If a people should decide that the social maximization of utility is a goal worth striving for, it could doubtless make substantial progress in the direction of that goal, without waiting for the development of accurate means of measuring differences in the capacities of different individuals to get satisfaction from the consumption of various kinds of economic goods. For, though there are undeniable differences of this kind, they are unquestionably less pronounced than the present differences in individual incomes. Moreover, many of these differences in human capacities are, beyond all doubt, differences that result from environment rather than heredity, and these would tend to disappear as the present-day members of society passed gradually from the scene—assuming, of course, that the program to maximize utility was launched forthwith.

Yet another point should be noted in this connection. Though the specific goods that satisfy human needs most fully differ considerably as between individuals, there is no reason to suppose that the *total amount of individual income* needed by one person is necessarily very different from that needed by another. The case is well stated by Professor Hobson: "An absolutely equal distribution of bread, or any other necessity of life, on a *per caput* basis, would evidently be a wasteful economy. What applies to the prime physical wants will apply more largely to the goods which supply 'higher' wants. For as one ascends from the purely animal to the spiritual wants, the divergences in capacity of utilization will grow. This does not necessarily imply very wide differences in the aggregate quantity of wealth which can be usefully consumed by different persons, because deficiencies in some tastes or capacities may be compensated by development of others. Moreover, the widest personal differences will usually lie outside the range of economic satisfaction."¹⁶

If, then, the members of a society regard the social maximization of utility as worth while, they need not be deterred by the fear that the goal is wholly beyond their reach. Those who work for social advance along economic lines, as in other fields, must often content themselves with a smaller degree of progress than they had hoped for. Trying to get the most out of consumption for society as a whole may be a Herculean task, but that is scarcely a sound reason for not attempting it. For, as Sir Philip Sidney said several centuries ago: "Who shootes at the mid-

¹⁶ J. A. Hobson, *Work and Wealth*, p. 108.

day sonne, though he be sure he shall never hit the marke, yet as sure he is he shall shoote higher than who aymes but at a bush." Any increase in social utility that might be achieved, though it falls far short of full maximization, will be accounted better than no increase at all by those who believe sincerely that the social maximization of utility in consumption is a goal worth aiming at.

Consumption in the Form of Leisure. Earlier in the chapter we discussed consumers' choices as among different kinds of consumers' goods, and as between present and future goods. But there is yet another type of choice that people, individually or in groups, are called upon to make—the choice between more consumers' goods and less leisure, on the one hand, and less goods and more leisure, on the other. There is little point to having a huge income in the form of consumers' goods if the business of acquiring them robs one of leisure in which to enjoy these goods. "What is a man," asks Hamlet, "if his chief good, and [profit] of his time, be but to sleep and feed? A beast, no more."

Leisure, it would seem, is an indispensable condition to the attainment of a well-rounded life. Professor Hobson appropriately calls it "the opportunity of opportunities." However great a young man's native ability may be, he is powerless to develop it unless he has leisure. Herein lies the explanation of the low economic estate of many people whom circumstances have compelled to leave school and settle down to *steady jobs* as mere children; for they were handicapped from the very start by the absence of the leisure which the pursuit of many kinds of training demands.

However, we are interested chiefly, in our present discussion, in the individual's division of his time between *living* and *making a living*, once he has permanently joined the army of the gainfully employed. This, it should be said, is primarily a group rather than an individual matter to decide. For the average worker, however much he may desire leisure, is not in a position to work only six hours a day if his occupation is one in which eight hours constitute the established working day. It is usually groups of workers (operating through collective bargaining), or employers prompted perhaps by their employees, that decide what hours of work shall prevail, and these decisions in turn determine how much or how little leisure large masses of working people are to enjoy.

The choice between more consumers' goods and more leisure is related more closely, then, to social than to individual maximization of utility. Over a long period of time, it is quite possible to have an increase in both consumers' goods and leisure, as is demonstrated by the fact that real wages have been raised and hours of labor lowered substantially in the United States during the past half-century. This sort of thing is possible, of course, during a period of technological progress. But at any given time—say, in the year 1948 or 1949—a gain in leisure is likely to take place only through a sacrifice of consumers' goods. The demand made by

organized labor in the 1930's for the thirty-hour week seemed to suggest that the choice had already been made by the labor groups, but it remains to be seen whether they can actually put it into effect. If they succeed in so doing, they will almost certainly have to get along on a smaller quantity of consumers' goods than would be theirs if they worked forty hours a week. For it is virtually inconceivable that *at a given time and with no change in the technique of production* as much goods can be turned out in thirty hours of work as could be turned out in forty hours.

This does not mean that the movement toward greater leisure is unwise. It might, on the contrary, have a profoundly beneficial effect upon both individual members of society and society as a whole. The outcome would depend upon how this additional leisure time was employed. If used for wholesome recreation, for the pursuit of hobbies, for self-development, for community undertakings of various kinds, and for the exercise of a positive and intelligent interest in social affairs generally, the loss in economic goods would probably be as nothing in comparison with the gain in the "good life" that would accrue to great numbers of people.

But though gains such as these are doubtless more important than the economic goods that could have been made had these leisure hours been given over to work, we must not delude ourselves into supposing that we could have both the leisure and the goods. And however laudable the drive for shorter hours may be, we should recognize the fact that it is based largely upon a false premise—the notion that hours of labor must be shortened so that there will be enough work to go around. Apparently some people do not realize that if the thirty-hour week would give employment to all who want it, the forty-five-hour week would do not only that, but would also provide a national income approximately 50 per cent larger than could be had under the shorter week. We are not arguing that the longer working week is preferable, but merely that it would provide us with more economic goods, and, as will be shown clearly in our study of the "make work" fallacy,¹⁷ would not necessarily lead to unemployment.

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1. What justification, if any, is there for saying that consumption is the goal of production?
 2. Coal consumed in a locomotive is not consumption, but coal consumed in a house-heating furnace is consumption. Explain.
 3. "The subject of consumption should be treated as extensively as production, in economics textbooks." Argue *pro* and *con*.
 4. In spending their money incomes, why do people choose certain commodities and services instead of other economic goods?
 5. "Consumption is regulated by prices." Explain.
 6. It is sometimes said that production is guided by consumers. What is the meaning of this statement?

¹⁷ In chap. 31 (vol. 2).

7. "Whether people buy or refuse to buy may have important economic consequences." Why?
8. What has the principle of diminishing utility to do with the maximization of utility in consumption?
9. How can an individual know when he has maximized the utility obtainable through the expenditure of his money income?
10. In what way is the equalization of marginal utilities related to the maximization of utility in consumption?
11. The maximization of utility is a matter of the utmost importance to those who have small money incomes. What factors might lead to their failure to achieve maximization?
12. Discuss present and future consumption, and explain why people sometimes choose the latter in preference to the former.
13. What is Professor Hobson's attitude toward future rather than present consumption for members of the low-income groups? Why does he adopt this attitude?
14. What part of the savings of the United States in 1929 was made by those belonging to families having family incomes of less than \$3100 each? What conclusion in the chapter is based in part upon this situation?
15. State, in your own words, how the distribution of income would probably be affected by a sincere attempt to maximize the social utility of consumption.
16. How would the maximization of utility affect "conspicuous consumption"? Why?
17. Do not the extravagant expenditures of the very wealthy provide work for others? Is this not sufficient justification for such expenditures? Why or why not?
18. Discuss the possibility of actually achieving the social maximization of utility in consumption.
19. Are there any serious obstacles to the attainment of the individual maximization of utility in consumption? Explain.
20. What is Professor Hobson's answer to the statement that the great differences in human capacities for getting satisfaction from consumption lead to the necessity of having great differences in individual incomes?
21. Discuss leisure as "the opportunity of opportunities."
22. Upon what economic fallacy is the appeal for a thirty-hour working week sometimes based?

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Waste in Consumption

A CONSIDERABLE PART OF THE PRECEDING CHAPTER WAS DEVOTED TO analyzing the principle of individual and social maximization of utility in consumption, and to showing that, from the social point of view, it may be argued that it is desirable that commodities and services be consumed in such a way as to yield the maximum of utility. It would seem to follow that any failure on the part of society to achieve the maximization of utility must be regarded as waste in consumption. We may define waste in consumption, then, as *any disutility experienced by society through the consumption of harmful commodities or services, or any loss of utility suffered through the inefficient use of consumers' goods or services*. Our present task is to look about for evidences of consumption which, according to this definition, is wasteful, and then to inquire into the possibilities of reducing or eliminating consumption of this kind.

DISUTILITY IN CONSUMPTION

The Meaning of "Illth." Since consumers' goods come under the general heading of wealth, we should expect all consumers' goods to contribute to the well-being of those who use them. But some consumers' goods and services seem very unlikely to benefit the consumers. Ruskin was so strongly impressed with this fact that he coined the word "illth"—later popularized by Professor Hobson—and applied it to goods which he thought, because their use was likely to have ill effects upon society, should not be produced.

Illth is, of course, the very antithesis of wealth, since its consumption brings disutility instead of utility. Professor Hobson, following Ruskin's lead, says in this connection that "everyone will admit that many sorts of marketable goods and services are injurious alike to the individuals who consume them and to society. A large proportion of the stimulants and drugs which absorb a growing share of income in many civilized communities, bad literature, art and recreations, and the services of prostitutes and flunkies, are conspicuous instances."¹ But the "many sorts" of goods

¹ J. A. Hobson, *Work and Wealth*, New York, The Macmillan Company, 1926, pp. 106, 107. Our many citations of *Work and Wealth* are attributable to the fact that Professor Hobson (who died in 1940) was an outstanding "welfare economist" of his day, whose ideas are most fully set forth in that work.

that are referred to in this quotation are not so easy to locate in the market place. Indeed, it is something of a task to enlarge the list of "conspicuous instances" drawn up by Professor Hobson, and even some of these items might not be regarded by everyone as illth. What, for example, is bad literature? Would it include every book condemned by the late Anthony Comstock (the crusader against obscenity who sought for years to purify the reading matter of the American people)—even a work that was hailed by recognized critics as great literature? And would an attempt to abolish bad literature permit to go unchallenged those sugar-coated novels which, however innocuous they may be from the point of view of morals, are weakly constructed and slovenly written, and fail completely to hold the mirror up to nature?

The Rarity of Illth. A division of consumers' goods into "wealth" and "illth" assumes the existence of an agency that is competent to pass upon such matters, and one, moreover, whose decisions would meet with the approval of the general public. But it seems to us that such a division is scarcely necessary—that a far better plan is to grant freedom of choice to consumers, keeping them informed, however, of the dangers of any goods that are likely to prove harmful to purchasers. Few kinds of consumers' goods that are offered for sale today are so certain to bring disutility, and so clearly incapable of giving utility, that by common consent they could be designated "illth." There are exceptions, to be sure. Perhaps the best examples are to be found among the so-called patent medicines and in the field of adulterated commodities. Few intelligent people would argue that a "cancer cure composed of water diluted with impure alcohol"² could have any curative value, or deny that it might do positive harm by delaying the application of scientific methods of treatment; and few would question that raw milk preserved with liberal quantities of formaldehyde might easily yield more disutility than utility. In instances such as these, there would seem to be ample grounds for outlawing the goods in the interests of the public health.

Disutility from Misuse or Excess Use of Goods. But when all is said and done, there are relatively few clear-cut cases of consumers' goods that could not conceivably yield utility. Such examples as may be cited result from our practice of producing for profit rather than for use, and these goods find a sale only because of the ignorance of the purchasers. If we were to include among items of illth those goods which have utility-yielding possibilities but are often used in harmful ways, the number would be substantially increased. Morphine may be used beneficially for the relief of pain, or consumed destructively in developing or satisfying the drug habit. Alcohol unquestionably has its legitimate uses, but its abuse sometimes leads to drunkenness and degradation. A pistol may have

² Cited in Stuart Chase, *The Tragedy of Waste*, New York, The Macmillan Company, 1926, p. 64.

social utility when carried by a policeman, but social disutility in the hands of a gangster. Finally, to cite an example of a common misuse of a consumers' good, an excess of heat in a dwelling means the consumption of more fuel than should be burned, and, at the same time and as a direct consequence of this waste in consumption, a probable increase in nose and throat ailments among those who occupy this overheated house. This sort of illustration might easily be multiplied many times, so likely is the excessive use of a consumers' good to result in disutility rather than utility.

It would seem, then, that positive disutility in consumption is more likely to result from the misuse or excess use of goods than from the consumption of goods which do not have any legitimate uses. We believe it is imperative to prohibit the production of so-called consumers' goods which seem certain to injure those who use them, and to regulate strictly—as is now sometimes done—the sale of firearms, habit-forming drugs, and other commodities and services which, if purchased by irresponsible persons, may lead to extensive or irreparable damage. But since most good things are capable of being turned to bad uses, prohibition and regulation cannot provide a complete solution of the problem. The remedy seems to lie, rather, in launching a program which will enable consumers to exercise genuinely intelligent choice in spending their money incomes. We shall deal with this matter more specifically in a later section of the chapter.

ECONOMIC INEQUALITY AND WASTE IN CONSUMPTION

We revert now to a matter which we have touched upon several times;³ namely, that waste in consumption is closely related to gross economic inequality—so closely, indeed, that it seems highly unlikely that we shall ever achieve anything even approximating the social maximization of utility in consumption without bringing about, also, something in the way of an equalization of incomes. Certainly, the maximization of utility would be wholly impossible in the face of the great economic inequalities which exist today.

The explanation of this statement is tied up, as we noted in Chapter 29, with the principle of diminishing utility. According to this principle, the utility of a dollar is smaller to a man of great wealth than to a poor man. The loss of a dollar would mean little or nothing to a millionaire, but to a day laborer it might mean cutting down on the purchase of food for his family. The principle is one which not only exists in academic circles, but is also in good and regular standing in the world of practical affairs. It is, of course, the theory upon which most civilized nations have built

³ More particularly in chaps. 27 and 29.

their systems of taxation. For modern taxes are, in general, based upon ability to pay, as we shall see in our treatment of taxation in Chapter 44 (Volume 2).

Diminishing Utility and Progressive Taxation. A wage earner in the United States is not required to pay any federal income tax on the first \$500 of his income, on the theory that up to that point the utility of every dollar is sufficiently great to warrant exemption. But a sharply progressive surtax is imposed upon all net surtax income (which includes all income, except a \$500 exemption for the taxpayer and \$500 additional for each of his dependents), reaching the maximum rate of 88 per cent on that portion of any income which exceeds \$200,000. The implication is perfectly clear. We have accepted the principle that the rich should make larger contributions to public expenditures than the poor, not only absolutely but also relatively, because a dollar means less to the rich than to the poor.

Current Inroads upon Large Incomes. It might be argued that the acceptance of the principle of progression for the purpose of minimizing sacrifice in the payment of taxes does not necessarily lead to an advocacy of equal (or approximately equal) incomes in the interests of maximizing utility in consumption. And yet these two ideas have much in common, and their differences seem to be those of degree rather than kind. Both are based upon the principle of diminishing utility. And though progressive taxation, as practiced today, does not take so much of our rich men's annual receipts as to bring about an approximate equalization of incomes available for individual spending, it goes in many instances much further than is generally realized.

The present federal income tax in the United States takes 67 per cent of a \$100,000 income, 86 per cent of a \$500,000 income, 88 per cent of a million-dollar income, and 90 per cent of a five-million-dollar income. Though the absolute amounts that these income-getters are permitted to retain are still large, there is no denying that present-day progressive taxation imposes considerable restrictions upon the exercise of property rights in income. We do not limit the amount of income a man may *receive*, but we sometimes limit radically the amount he may *keep*. It seems fair to say that the principle of progression in taxation now has general acceptance, and that it could be used, if society ever deemed it desirable, to bring about a virtual equalization of incomes.

Trends Toward Social Maximization of Utility. Furthermore, the revenue derived from taxation is not being employed nowadays merely for carrying on what we ordinarily think of as the "affairs of government." Rather, it is being used increasingly to provide for human needs which we used to expect every man to look after for himself. When billions are collected from taxpayers and spent for the relief of the unemployed, as in the post-1929 depression, the process is one of taking from those who

have and giving to those who have not. It is, in effect, a procedure through which society, at one and the same time, moves in the direction of the equalization of incomes and the maximization of utility. To be sure, the movement is not a particularly speedy one, but the trend is unmistakable. We are not suggesting that society is consciously attempting to achieve the equalization of incomes or the maximization of utility, but simply that neither of these propositions is so foreign to our present economic order as it might appear, at first sight, to be.

Social Maximization of Utility in Wartime. The national income of a country consists of economic goods, rather than money, though these goods are commonly expressed in terms of money. In a conflict such as World War II, the production of war supplies increases steadily, and the land, labor, and capital available for making civilian goods shrink with every passing day. However, it is important to have sufficient consumers' goods to maintain civilian health and morale, and thus insure the efficient performance of civilian functions that are essential to war production; and it is important, moreover, that these consumers' goods be distributed to the greatest *social* advantage—that is to say, in a way which will bring about the social maximization of utility.

To this end, the late President Roosevelt launched a program of price stabilization which was aimed at holding down the *cost of living* and thus maintaining *standards of living*, so far as this was feasible in wartime. When there is a shortage of goods, it is ordinarily reflected in a rise in price, as was the case in 1920 when the price of granulated sugar rose to 30 cents a pound because there was so little sugar to be had. The prices of sugar and other unusually scarce consumers' goods were held in check reasonably well during World War II, through the use of the price controls which will be described in Chapter 36 (Volume 2). But the government found it necessary, also, to apply direct rationing to many commodities. Sugar, automobiles, tires, gasoline, meats, canned goods, and a host of other commodities were rationed, on the theory that every member of society should be assured his "fair share" of those economic goods which were very limited in quantity. We shall not attempt to describe here the procedure which was followed in allotting rations (in some instances, differential quantities) to individual members of society. The point we wish to make is that the rule of "first things first"—which is directly in line with the social maximization of utility in consumption—is commonly resorted to in time of emergency such as war; and it is being applied more and more extensively in normal times as well.

Conspicuous Consumption and Waste. A serious disadvantage resulting from great inequalities in incomes is the tendency, on the part of the very wealthy, to spend extravagantly for the sake of winning the admiration of those unable to buy on so lavish a scale. This subject is discussed

elsewhere in the present volume,⁴ but is introduced briefly at this point because of its obvious relationship to waste in consumption.

Nassau William Senior, a noted nineteenth-century economist, wrote many years ago about "the desire for distinction—a feeling which if we consider its universality, and its constancy, that it affects all men and at all times, that it comes with us from the cradle and never leaves us till we go into the grave, may be pronounced to be the most powerful of human passions." Since this desire for distinction commonly takes the form of competitive expenditure, it needs no argument to show that waste in consumption is bound to accompany great differences in spending ability. Among modern examples of conspicuous consumption are the \$3,000,000 private home built for a well-known industrialist, the two hundred servants employed in the home of a prominent financier, the fifty-one passenger cars belonging to the several members of a Philadelphia family, and—on a somewhat smaller scale, but none the less interesting—the mink coat worn by All-American Biff, a bull terrier, "tailored for him by one of Chicago's leading furriers and given to him for a Christmas present" by his owner.⁵ It is expenditures such as these that led us to observe, in Chapter 29, that the elimination of both individual and social waste in consumption could be attained, if at all, only in a society in which incomes were fairly equal.

The very wealthy may properly be charged with much of the waste resulting from conspicuous consumption, because their large expenditures constitute a formidable part of the total waste of this kind, but there are many in the lower-income groups who must also accept a share of the blame. For just as

Great fleas have little fleas upon their backs to bite 'em,
And little fleas have lesser fleas, and so *ad infinitum*,

so, too, there is a hierarchy in the realm of conspicuous spenders. "Keeping up with the Joneses" appears to be no less popular among middle-class income-getters than among the multimillionaires; and the practice of living beyond one's means—which is a perfectly natural outgrowth of an unwillingness to be outshone in spending—is so common that it no longer excites comment.

Since few are wholly guiltless of spending for display, it may seem somewhat unfair to single out the very rich and charge them with special culpability. But conspicuous consumption is a social ill that originates among the economically great, and works its way down to the rank and file. Since the very wealthy set the pace that others try to follow, they

⁴ See chaps. 27 and 29.

⁵ *New Republic*, January 13, 1937. The article cites the case of another lucky dog, Pico, owned by Edgar Allan Woolf, a motion-picture writer. "Noticing that Pico seemed to suffer from the heat, Woolf called in a refrigeration engineer and had the dog-house air-conditioned."

must be prepared to accept a particularly large portion of responsibility for the waste in consumption that results from this lavish expenditure. It may be true, as Nassau Senior says, that the desire for distinction is the most powerful of human passions; but that is no reason why society need permit it to take the form of competitive spending, when spending of this sort must inevitably interfere with the attainment of the social maximization of utility in consumption.

INDIVIDUAL MAXIMIZATION OF UTILITY IN CONSUMPTION

We feel that our discussion of consumption thus far should have convinced the reader that the social maximization of utility cannot be achieved in the presence of great inequalities in individual incomes. But even if we had an equalization of incomes, there could be no social maximization unless we managed in some way to bring about individual maximization of utility in consumption. Utility is an essentially personal thing, and two individuals with equal money incomes might have to spend in widely different ways in order for each to get the most out of his income. Even in the presence of great inequalities in incomes, such as exist today, much would be gained if we could achieve the individual maximization of utility in consumption; and every advance of this kind would be a step in the direction of social maximization of utility. Anything that is done in the way of increasing individual utility in spending a given money income is a net gain; it not only helps the individual himself, but it also helps to bring society a little closer to the goal of the social maximization of utility in consumption. We may now examine some specific causes of the consumer's failure to get the maximum of utility from the expenditure of his money income.

Waste Through Carelessness in Purchase and Use. Success in making one's money income go as far as possible in providing for one's wants depends upon the exercise of great care in the purchase of commodities and services. It is wasteful to spend a dollar—or a dime—for one thing if its expenditure for something else would result in greater utility. This very simple point seems often to be quite overlooked. Many people—and sometimes those who can least afford it—appear to do much of their buying impulsively rather than deliberately. The sight of a chic hat in a shop window, or a gay necktie in a men's furnishing store, drives into limbo all thought of more urgent needs, and the thing is bought on the spur of the moment.

Another source of waste in consumption is the tendency of many people to buy without making a comparison of prices, either as between equally satisfactory brands which sell at different prices, or between competing dealers' different prices for the same commodity. The failure to buy at

recurrent "special sales" such non-perishable goods as soap, paper towels, and canned fruits and vegetables, often leads to paying 15 to 25 per cent more for these commodities than would be necessary if a little care and foresight were exercised in shopping for staple articles, many of which (being nationally advertised under copyrighted names) are clearly the same no matter from whom they are bought, or at what price. Many people, too, are likely to assume that high price necessarily means high quality, on the theory that "you get just about what you pay for." But goods are sometimes sold on the basis of "class price," with prices adjusted to the paying capacity of the customer for commodities that are unquestionably the same. Even harder on the notion that high prices mean high quality was a series of laboratory tests made on ten prominent brands of vacuum cleaners several years ago; for the tests showed that the highest-priced cleaner in the lot was the one that gave the poorest performance! Obviously, price is not always a measure of quality.

Chargeable to carelessness, also, is the failure of consumers to get the maximum of utility out of goods once they have purchased them. An examination of the contents of American garbage cans during World War I revealed the fact that large quantities of edible bread and meat were being thrown away. In the matter of converting odds and ends of food into wholesome, savory dishes, American housewives might learn much from the women of France and Germany, and thus save some millions of dollars a year with no loss in utility. The readiness with which many people discard clothing which is still entirely presentable, radio sets which are capable of giving excellent reception, and automobiles which are practically as serviceable as the latest models, is responsible for much loss of utility in consumption. Clothing and automobiles must not be expected to last forever; but if a suit of clothes is thrown away or a car "turned in" before it has given its owner the maximum of *acceptable service*, it would seem that this is waste in consumption. And unless the owner has carefully weighed the pros and cons of the situation (which is all too seldom the case), the waste may well be charged to carelessness in the use of consumers' goods. Often, of course, the retirement of an old good in favor of a new one is in the nature of conspicuous consumption.

Conspicuous Consumption Once More. Conspicuous consumption is responsible not only for social waste in consumption, but also, in all probability, for much of the failure of individuals to maximize the utility purchasable with their money incomes. There is a genuine satisfaction that comes from the consumption of a commodity or service which adds to one's physical, mental, or social well-being. Doubtless, also, there is satisfaction of a sort to be had from outdoing another in spending for the sake of display—else it would scarcely be so widely practiced. But it may well be questioned whether this is not, after all, a spurious kind of

satisfaction, and recognized as such by the conspicuous consumer himself in his saner moments. For all save the very wealthy, of course, every lapse into conspicuous spending reduces the amount of money income available for expenditures of other kinds. And it would seem to follow that, for most people at least, indulgence in conspicuous spending must render impossible the attainment of individual maximization of utility in consumption. "Among all but the very poorest classes," writes Professor Carver, "the cost of living is due not so much to the cost of things which are desired for their own sakes as to the cost of the things which are desired because they are possessed by others with whom one associates."⁶

Waste Through the Ignorance of Consumers. Professor Carver, in undertaking to prove that capitalism is preferable to socialism, argues that people as a rule buy more intelligently than they vote.⁷ However that may be, the truth is that most people do not buy very intelligently. In some instances, as we noted in an earlier section, the fault is one of carelessness—a failure to apply to the spending of one's money income the information which one has or might readily get. In many cases, however, the purchaser is not to blame for his inability to judge the relative merits of consumers' goods. Doubtless the average man is more expert as producer than as consumer. He is a specialist in production, having devoted his time and energy to mastering a single trade or task, while as a consumer—or a buyer—he ventures into a hundred fields, in none of which can he hope to have very extensive information. The result is that in most of his buying he bargains at a distinct disadvantage, since he pits his meager knowledge against the skill and experience of the seller.

It is small wonder, then, that the consumer often fails to get the most for his money. We have already seen that price is not a safe guide to quality, nor for that matter is the appearance of a commodity to be relied upon. The piece of silk cloth that feels so strong and durable is probably weighted with sugar or lead; the oranges that appear so lusciously ripe may owe their sunny complexion to gas or dye; and the mattress that promises a lifetime of peaceful sleep may develop little hills and valleys within the year. Our ignorance of "true values" in the fields of food, clothing, cosmetics, housefurnishings, automobiles, and other consumers' goods is most profound. As one writer puts it, "With no defense except a waning quality of common sense, the ultimate consumer makes his blundering way; a moth about a candle."⁸

⁶ T. N. Carver, *Essays in Social Justice*, Cambridge, Harvard University Press, 1922, p. 143.

⁷ *Ibid.*, pp. 113-125.

⁸ Stuart Chase and F. J. Schlink, *Your Money's Worth*, New York, The Macmillan Company, 1927, p. 41. The woeful ignorance of consumers is dealt with at length, also, in F. J. Schlink and Arthur Kallet, *100,000,000 Guinea Pigs*, New York, The Macmillan Company, 1933; and M. C. Phillips, *Skin Deep*, Washington, N. J., Consumers' Research, Inc., 1934.

However, the consumer is not wholly helpless, for there are several increasingly influential agencies that are working in his behalf. We are not now referring to such assistance as is rendered by the enforcement of federal and state legislation designed to discourage fraud and misrepresentation; or to such agencies as the Federal Trade Commission and the Better Business Bureaus, which do something to tone down the extravagant claims of advertisers, and the "Good Housekeeping Institute," which tests and guarantees all articles advertised in *Good Housekeeping*, but declines to say which is the best among several competing brands. We have in mind, rather, Consumers' Research, Inc., and the Consumers Union of the United States, Inc.,⁹ two non-profit organizations which undertake to provide their respective subscribers with accurate, unbiased information about many kinds of consumers' goods.

These "services" do not pretend to cover the field completely, but they are already sufficiently extensive as to be of great assistance to the average consumer, and their data are being revised and added to continually. Many of the tests which form the basis of their reports are made in the laboratories of Consumers' Research or Consumers Union, though some are conducted in outside laboratories. The information comes to the subscriber in the form of *comparative* lists, which classify specific brands of a commodity as *good*, *fair*, or *poor*. It goes further and tells which is the "best buy," so that the customer learns not only what brands to avoid, but also—and this is of the utmost importance—which particular brand will give him the most for his money. Our publicly financed United States Bureau of Standards might do much to protect the consuming public from being imposed upon, by dedicating a part of its admirable facilities to the discovery and publication of the truth about consumers' goods that are used by millions of Americans. Indeed, it would help somewhat if the Bureau did nothing more than publish the results of the tests which it now makes for business men and corporations. So long as it fails to do either or both of these things, the consumer must continue to rely upon privately supported agencies, such as Consumers' Research and the Consumers Union, which appear to be performing a necessary social function—and performing it successfully in the face of considerable opposition from business men who find their disclosures somewhat embarrassing.

Waste Through Deceptive Advertising. Advertising has been, and will probably continue to be, one of the chief obstacles to the individual maximization of utility in consumption. There is no question that advertising may play a socially useful rôle in the creation of possession utility. But if, at any time, advertising subtracts from the sum total of utility in society, instead of adding to it, those who are responsible are clearly guilty of social waste; and if advertising leads buyers astray and prevents

⁹ Consumers' Research, Inc., Washington, N. J.; Consumers Union of the United States, Inc., 17 Union Square, New York City.

them from maximizing utility, it may properly be condemned on the basis of contributing to waste in consumption.

Advertising may be getting more truthful (as its advocates frequently claim) or it may not, but in any case it still has a long way to go before the consumer can safely accept it at face value. Outright falsehood may be rare, but of unwarranted implication there is enough and to spare in many advertisements. The situation is interestingly described by an advertising publisher in a speech made to advertising men. He said, in part:

Too many of our creators of advertising, it would seem, have forsaken the mansions of logic to wander capriciously in a weird new state—a state that can be described only by the coined word “Adnesia.” Only in this strange state are cigarettes viewed as an aid to health; only here do kindly professors go about counseling mothers in the delicate matter of administering laxatives.

Where, except in “Adnesia,” could one reasonably expect to find Romance in a package of soap chips, or detour the divorce court by the simple expedient of changing to a new brand of tooth paste? And surely only one long-resident in this crazy state could have conceived the cock-eyed notion of borrowing the testimony of dimpled and diminutive Shirley Temple to exploit a two-ton motor truck! There, indeed, is genius in its dizzy eminence.¹⁰

A very mild instance, but an actual one, of poetic license in the realm of advertising was revealed recently by the Federal Trade Commission. In singing the praises of its razor blades—“Made of English Razor Steel”—a New York department store announced: “We went to Pennsylvania for a new secret-process, high-speed steel. In ingots, we took it to England to be rolled to a ribbon, because the British armorers roll steel with unbeatable accuracy. We brought the ribbon-reels back from England and had them cut into blade-shapes, then honed and stropped with more loving care than we’ve ever seen put into such a job.” In fact, these blades were stock blades made by a New Jersey corporation, and not under supervision of the department store. The Federal Trade Commission ruled “that the respondent’s false representations that it oversees each step in the manufacture of these blades tends to lead a substantial part of the public to attribute to them a quality not usually attributed to merchandise made for the trade generally.”¹¹

Even if we accept literally the statement of an experienced advertising man that “advertising copy during the past several years has been a bunch of blah, blah, bunk,”¹² the fact remains that advertising pays. That is to say, it pays the *seller*—whatever the effect upon the buyer may be—

¹⁰ “What Advertising Men Say About Advertising,” *Special Bulletin* 25, Washington, N. J., Consumers’ Research, Inc., October, 1936, p. 1.

¹¹ The case is cited in Consumers’ Research *Bulletin*, Washington, N. J., Consumers’ Research, Inc., March, 1937, p. 6.

¹² “What Advertising Men Say About Advertising,” p. 6.

for it unquestionably stimulates sales. Indeed, a recent study made by a research specialist leads to the conclusion that in some cases advertising is more important than low prices, style, or quality, in selling women's, misses', and junior misses' dresses and sports wear.

Table 33 presents the significant conclusions of this study in convenient form. It shows that in selling women's dresses advertising proved to be 116 per cent as important as low price, 127 per cent as important as style, and 124 per cent as important as quality. In disposing of junior misses' dresses, the relative importance of advertising to low price, style, and quality was shown to be, respectively, 122 per cent, 193 per cent, and 223 per cent. If these figures have any validity at all, they suggest

TABLE 33. RELATIVE IMPORTANCE OF ADVERTISING AND OTHER MERCHANDISING FACTORS IN SELLING CLOTHING (IN PERCENTAGES)

(Source: *New York Herald Tribune*, July 21, 1936)

Commodity	Percentage Importance of Advertising to		
	Low Price	Style	Quality
Women's dresses.....	116	127	124
Misses' dresses.....	79	121	135
Junior misses' dresses.....	122	193	223
Sports wear.....	94	133	156
Average.....	103	143	159

to the self-seeking business man that it is wiser to spend on advertising than on quality. What is said about a commodity is apparently more important to the purchaser than the quality of the commodity itself. This amounts, of course, almost to an invitation to market shoddy goods by means of intriguing sales talk, rather than sound goods through accurate, straightforward description. It would be childish to suppose that enterprisers never take advantage of a situation of this kind, and equally so to think that individual maximization of utility in consumption can be achieved until the situation is remedied.

CONSUMERS' COOPERATION

We have sketched briefly some of the obstacles that stand in the way of the attainment of individual maximization of utility in consumption. These and other difficulties experienced by consumers have led to the conclusion that consumers' goods might be purchased more advantageously if the job were done collectively instead of individually. The outcome of this conviction has been the organization of consumers' cooperative associations. The recent spread of the cooperative movement among con-

sumers warrants a brief discussion of the aims and methods of consumers' cooperatives.

Rochdale Society of Equitable Pioneers. Consumers' cooperation had its beginning in Rochdale, England, in December, 1844, when twenty-eight weavers banded together into an organization through which they hoped to get more for their money than was possible when they bought as individuals from retail stores. With a total capital of about \$150, the Rochdale Society of Equitable Pioneers bought a small stock of flour, oatmeal, butter, and sugar, with which they began their undertaking of squeezing out the middleman's profits, and thus increasing the utility obtainable from the spending of their wages. By the end of the year 1845, they had seventy-four members, a paid-up capital of \$900, and a record of having transacted \$3500 worth of business in a twelve-month period. In 1934, this same Rochdale Society had 44,000 members, nearly \$3,000,000 in capital, and did a business totaling \$3,285,000. From 1844 to 1934, its total volume of business was \$150,000,000, and it distributed among its members "surplus-savings" to the amount of \$20,000,000.¹³

"The basic principles adopted by these famous weavers to solve their own purchasing problems were eightfold: Their consumer cooperative would sell goods at prevailing local prices; a fixed rate of interest would be paid upon capital invested; profits¹⁴ after payment of all expenses including interest, should be distributed in proportion to member purchases; no credit would be granted; both sexes were to have equality in membership rights; each member was to have just one vote; regular meetings of members were to be held; and accounts were to be properly kept and audited."¹⁵

The Goal and Method of Consumers' Cooperation. The substantial degree of success achieved by the Rochdale Pioneers is perhaps less surprising than the fact that their fundamental principles, as originally outlined, have endured for almost a century and even today form the basis of most of the consumers' cooperatives throughout the world. According to the Cooperative League, the national federation of consumers' cooperative associations of the United States, present-day consumers' cooperation is based upon four great principles, upon which will eventually be built a Cooperative Economic Society. "Its principle of open membership will give us economic brotherhood. Its principle of 'one person, one vote' will give us economic democracy. Its principle of 'minimum interest on shares' will give us security instead of speculation. Its principle of 'distributing the surplus savings as dividends on the basis of patronage'

¹³ J. P. Warbasse, *Cooperative Democracy*, New York, Harper & Brothers, 1936, 3rd ed., pp. 26-29. This book is frequently referred to as "the bible of the consumers' movement."

¹⁴ Defined by the cooperatives themselves as savings returned to the consumer, and not profits—a distinction affecting the application of income taxes.

¹⁵ *The Index*, New York, The New York Trust Company, December, 1936, p. 234.

will give us just distribution of wealth. These are the four corner stones of a Cooperative Economic Society."

From the tone of this statement, it is evident that consumers' cooperation is expected by its more ardent advocates to accomplish great things in times to come. To some, indeed, it appears in the nature of a crusade which is to save the world from communism and fascism, when capitalism shall have spent its force. But to the rank and file it means chiefly, and will doubtless long continue to mean, an agency which enables consumers to circumvent the retailer and effect a saving of, say, 10 per cent on many of their purchases. In the matter of quality, too, the cooperative can render a distinct service to its members, and one which will be more fully appreciated when its importance is more generally recognized. The quality of the goods that are sold cooperatively is usually high, but in any event the commodities are honestly described and fairly priced. Many of these products are manufactured to specifications laid down by the cooperators. For instance, it is now possible to buy cooperatively "a white floating household and bath soap, equal in quality to the most highly advertised 'floating' soap on the market," and at a price roughly one-third less than that charged in grocery stores for soap of equal quality sold under a copyrighted name. Here is an example of cooperation providing both low price and assured quality; and in many cases the latter may be even more important than the former.

Ordinarily, consumers' cooperatives are organized on a very small scale, and expand gradually as their service attracts new members. In urban and suburban communities they often start as cooperative buying clubs, organized by white-collar or professional people. The commodities handled may include groceries, fruits and vegetables, dairy and poultry products, dentifrices and simple cosmetics made up to formulae, gasoline, and a variety of other articles used by the average family. In rural sections of the country, such farm supplies as fertilizers, seeds, feed for cattle and poultry, binder wire and twine, spraying materials, paint, tires, and lubricating oils, are often handled more extensively than the usual household goods. It is estimated that there are in the United States three times as many cooperative associations handling petroleum products and stock feed as there are handling groceries.¹⁶

The principle of cooperation has also been applied to the sale of electrical power, the extension of credit (through credit unions), the writing of insurance, and various other services. An interesting development is "a chain of eleven cooperative cafeterias in New York City which has been operated successfully for fifteen years by Consumers' Cooperative Services.

¹⁶ *Fortune*, March, 1937, pp. 142, 144. The article, "Consumer Cooperatives," in that issue of *Fortune* was pronounced by the Cooperative League "the best and most recent picture of the current development" of the movement. Many of the data here presented were borrowed from this article.

The chain has added two new units during the depression, while paying its employees 30 per cent more than the N.R.A minimum wages."¹⁷

Retail, Wholesale, and Producing Consumers' Cooperatives. There were approximately 4300 *retail* cooperative associations in this country in 1944, with a total membership of more than 1½ million persons. In that year, these retail cooperatives did a gross business of \$557,000,000, an increase of 31 per cent over 1935.¹⁸ It is authoritatively estimated that the retail consumers' cooperatives of thirty-three countries sold nearly two billion dollars' worth of goods in 1935.¹⁹

Retail cooperatives buy their stocks of goods as advantageously as possible, striving to get high-quality goods at low prices. However, since the individual retail cooperatives are often too small to bargain successfully with producers, they have set up in the United States twenty-six large regional *wholesale* cooperatives, which buy from the factories and sell to the retail associations, to which they rebate the wholesale profits.²⁰ These wholesale cooperatives enter into contracts with manufacturers, packers, and canners. The contracts are for staple goods, made to laboratory specifications. In this way the retail cooperatives are enabled, as we have already suggested, to supply their members with goods of known quality.

One of the large wholesale associations is National Cooperatives, Inc., of Chicago, which makes contracts for bulk products such as oil, binder twine, feed and fertilizers, and did \$25,000,000 worth of business in 1935.²¹ The Cooperative Grange League Federation Exchange, Inc., of Ithaca, New York, is said to have done a \$24,000,000 business in feed, seeds, fertilizers, and other supplies during the fiscal year ending June 30, 1935. Looking at the volume of business transacted by wholesale cooperatives throughout the world, we find that more than a billion dollars' worth of goods were handled by the cooperative wholesale associations of twenty-eight countries in the year 1935.²²

"When consumer cooperatives reach a certain stage in their development, they tend to work back toward *producing* or *processing* the goods they sell to their members."²³ However, very little has been done in this field in the United States, where practically the only examples of cooperative production are the manufacture of bakery goods by one wholesale

¹⁷ *New Republic*, May 6, 1936, p. 360.

¹⁸ Other cooperatives for consumers in 1944 were the following: 850 electricity associations, with 1,149,700 members, doing a business estimated at \$60,000,000 for the year; 9000 credit unions, 3,027,700 members, \$212,000,000 worth of business; 2000 insurance associations, 10,510,000 members, \$190,000,000 worth of business. See *The Competition of Cooperatives with Other Forms of Business Enterprise*, House Report No. 1888, Washington, Government Printing Office, 1946, pp. 26, 27.

¹⁹ *Consumers' Cooperation Throughout the World in 1935*, Washington, United States Bureau of Labor Statistics, Serial No. R 499, p. 4.

²⁰ *Fortune*, March, 1937, p. 133.

²¹ *Ibid.*, p. 140.

²² *Consumers' Cooperation Throughout the World in 1935*, p. 10.

²³ *Fortune*, March, 1937, p. 137.

association, the manufacture of feed by two organizations, and the compounding of motor oils by three others.²⁴ The goods manufactured by the wholesale cooperative associations of sixteen leading countries had a total value of approximately \$270,000,000 in 1935.²⁴

Consumers' Cooperation in Other Countries. The cooperative movement in general has met with greater success in Europe than in the United States; and so, too, has that phase of the movement with which we are now dealing. England, the home of the original Rochdale Pioneers, remains the outstanding example of consumers' cooperation in number of members and volume of business transacted. About one-half of the families of England belong to cooperatives, and the cooperative stores there do about one-eighth of the total retail business of the country. The English Cooperative Wholesale Society, which was formed in 1863 and now consists of more than a thousand societies, "is the biggest distributing organization in the British Empire. It has a \$700,000,000 bank, a \$100,000,000 insurance company. It owns its own steamships, coal mines, olive groves, and, with the Scottish Wholesale, the world's largest tea plantations. It is the No. 1 buyer of Canadian wheat, the No. 1 British miller, No. 1 shoemaker, and second only to Lever Brothers in soapmaking. Its factories turn out everything from corsets to oil cake, from automobiles to saddlery."²⁵ The "surplus-savings" of the English consumer cooperatives in 1934 amounted to about \$125,000,000.

We shall not be able to examine in detail the status of consumers' cooperation in each of the countries in which it has gained a foothold. We may, however, present a few significant figures. Despite the efforts of the fascist dictatorships to destroy the consumers' cooperatives, these associations in 1935 transacted business amounting to \$157,000,000 in Germany and \$62,000,000 in Italy. The amount of business done in that year by consumers' cooperatives in other countries is indicated by the following figures: France, \$92,000,000; Finland, \$84,000,000; Denmark, \$76,000,000; Switzerland, \$63,000,000; Czechoslovakia, \$52,000,000; Norway, \$35,000,000; Australia, \$31,000,000; and the Netherlands, \$26,000,000. As we have already noted, the total 1935 sales of consumers' cooperatives in thirty-three countries totaled nearly two billion dollars.²⁶ In several countries that were particularly well served by cooperatives, the portion of total retail trade handled by the cooperative stores was approximately as follows: Finland, 25 per cent; England, 15 per cent; Denmark, 15 per cent; and Sweden, 10 per cent. A comparable figure for the United States is 1.3 per cent.²⁷

²⁴ *Consumers' Cooperation Throughout the World in 1935*, p. 14.

²⁵ *Time*, July 13, 1936, pp. 61, 62.

²⁶ *Consumers' Cooperation Throughout the World in 1935*, pp. 4, 5.

²⁷ *Fortune*, March, 1937, p. 139.

The Future of Consumers' Cooperation. We have said little by way of appraisal of the consumers' cooperative movement, for it has seemed best to allow the facts to speak for themselves. Nor shall we undertake to predict the future of consumers' cooperation, since it is scarcely the function of the economist to indulge in prognostication. It can do no harm, however, to note the observation of Roger Babson, the business men's counselor, that "merchants who laugh off these consumers' crusades are sitting on dynamite"; and the following comment from *Printers' Ink*, a trade journal: "If coops are to be viewed with alarm as poaching on the preserves of private business, there is plenty of room for alarm." Further manifestations of recent interest in consumers' cooperation have been the attention given the movement by the Roosevelt administration, which sent a commission to Europe to study the operation of consumers' societies there; a gift of \$1,000,000, made by the late Edward A. Filene, the Boston merchant, to assist in the establishment of cooperative department stores; and the creation, in 1944, of a Department of Consumers' Cooperation by the American Federation of Labor, to aid local unions in setting up cooperatives in collaboration with the Cooperative League of the United States.

On the other side of the picture is the stubborn fact that the movement has been slow to catch on in the United States. The half-billion-dollar business transacted by consumers' cooperatives in 1936 constituted only 1.3 per cent of our total retail trade; and three-fourths of the goods these cooperative stores sold to their members were not *consumers' goods*, in the strict sense of the term, but seeds, fertilizers, stock and poultry feed, and other *producers' goods* needed in carrying on the business of farming in our great agricultural states. There can be little doubt that the spurt taken by consumers' cooperation in the United States resulted, at least in part, from the hardships suffered in the post-1929 depression. "Years of general prosperity are usually lean years as regards the spread of the cooperative philosophy. That philosophy is primarily an economic one, making its appeal first to the financial self-interest of the individual, by the possibilities of savings that it offers. When times are good, when wages are high and money is plentiful, such small savings as the cooperative society offers make little appeal to the average wage earner in this country, especially considering the effort involved in obtaining these savings."²⁸

Consumers' cooperation has demonstrated that it can help the consumer to get low prices and high quality, and thus increase the utility obtainable through the expenditure of his money income. It has shown, through its wide spread in many European countries, that it is capable of attaining formidable proportions under favorable conditions. Whether the economic conditions in America and the temper of the people will

²⁸ "Organization and Management of Consumers' Cooperative Associations and Clubs," *Bulletin No. 598*, Washington, United States Bureau of Labor Statistics, p. 1.

prove suitable for its continued and extensive growth, we do not pretend to know; and on this point we decline to hazard a guess.

1. Define "waste in consumption."
2. What did Ruskin mean by "illth"?
3. Professor Hobson says that "everyone will admit that many sorts of marketable goods and services are injurious alike to the individuals who consume them and to society." Name as many items of this kind as you can.
4. If society should decide to prohibit the production of "illth," what definition of this term can you suggest for deciding whether a specific commodity should or should not be outlawed?
5. "Most good things are capable of being turned to bad uses." What is the significance of this statement in connection with maximizing utility in consumption?
6. "Waste in consumption is closely related to economic inequality." Explain.
7. What justification is there for saying that progressive taxation is based upon the Law of Diminishing Utility?
8. How might the provision of public relief during the depression be construed as a move in the direction of greater equality in the distribution of income?
9. The desire for distinction leads almost inevitably to waste in consumption. Explain.
10. What is the significance of the statement that "there is a hierarchy in the realm of conspicuous spenders"?
11. Give examples of the failure to maximize utility in consumption because of carelessness in the purchase and use of goods.
12. It is commonly assumed that high price means high quality, since "you get just about what you pay for." Argue that this notion is or is not correct.
13. Since some people delight in outdoing others in displaying their costly possessions, on what ground may it fairly be said that indulgence in conspicuous consumption involves waste in consumption?
14. What evidence is there that the ignorance of buyers leads to waste in consumption?
15. In what respects is the service of Consumers' Research and the Consumers Union more useful to consumers than that of the Good Housekeeping Institute?
16. State your views on the probability of a customer making a "best buy" among a half-dozen brands of a given good (say, soap) offered for sale by a department store. Explain how Consumers' Research or the Consumers Union might aid in making a sound choice.
17. Do you regard present-day advertising as an aid or a hindrance to the wise purchase of consumers' goods? Why?
18. Sketch the origin and growth of the Rochdale Society of Equitable Pioneers.
19. On what basic principles was the Rochdale Society founded?
20. What is the goal of consumers' cooperation, as set forth by the Cooperative League?

21. What varieties of commodities are handled by (a) urban and (b) rural consumers' cooperatives?
22. Describe the nature and extent of *retail*, *wholesale*, and *producing* consumers' cooperatives.
23. Describe the achievements of consumers' cooperation in England.
24. In what other countries, and to what extent, has the consumers' cooperative movement made progress?
25. What is your feeling about the future of consumers' cooperation in the United States? Upon what facts do you base your opinion?

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ECONOMICS

Principles and Problems

THIRD EDITION

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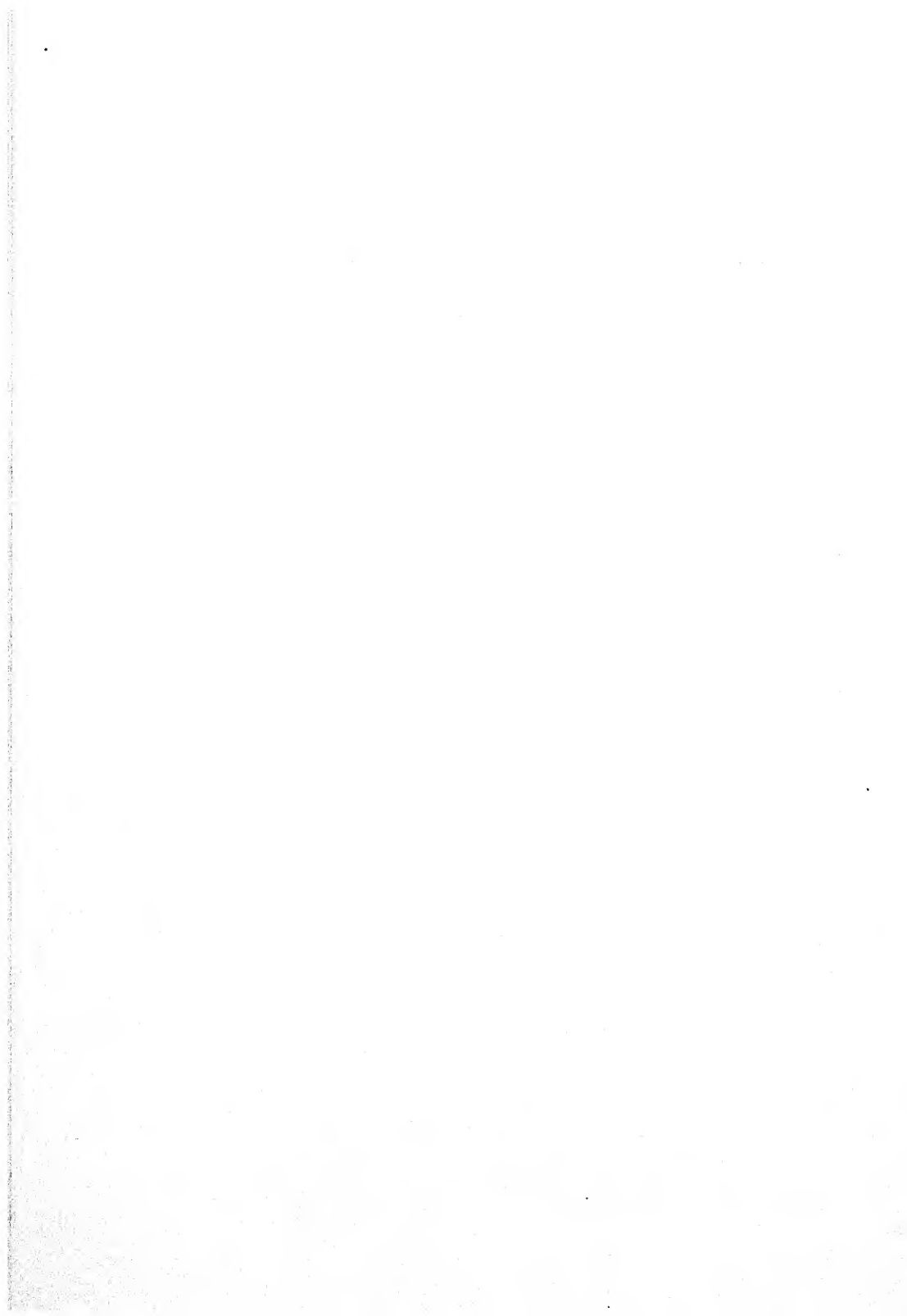
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PART SIX

The Mechanism of Exchange

The Process of Exchange

The Relation of Specialization to Exchange. In primitive industrial society people made goods chiefly for their own consumption. Under conditions of modern specialization an individual has no intention of consuming all, or even most, of his product. A specialist works with the deliberate idea of producing more of a given commodity or service than he himself will consume, so that he may exchange this excess for other commodities and services which have been created by other producers.

The farmer cannot consume all of the food products he raises, the tailor cannot wear all the clothes he makes, the contractor has no idea of occupying all of the houses he builds, nor has the surgeon a personal use for the large number of operations that represent his contribution to production. But these producers, who of course are specialists, have a definite desire for other commodities and services; and so, in effect, they take their surpluses of food, clothing, houses and surgical operations to other people, who give them in exchange shoes, automobiles, theatrical performances, and other economic goods which they desire.

Difficulties of Direct Exchange. We have, then, exchange going hand in hand with specialization. Specialization would be out of the question without exchange, and exchange could hardly exist without specialization. The means by which exchange of commodities and services is effected are of several kinds. First of all is *direct exchange* or *barter*, which is the type resorted to in simple stages of economic society and which consists of trading goods for goods.

But barter becomes extremely inconvenient as specialization increases. Imagine, for example, the difficulties encountered by an instructor in economics who is trying by direct barter, instead of by money exchange, to convert his specialized services into other services and commodities. This teacher of economics, needing a suit of clothing, goes to a tailor, who is also a specialist, and offers to exchange five hours of economics for one suit of clothes. But if the tailor should not be interested in economics, our instructor would not be able to make a trade; and he might have some trouble in locating a tailor who would be willing to exchange clothing for training in economic principles. There is always a danger, then, that in direct barter one of the parties in question will not care to receive what the other has to offer.

There is also the difficulty, in our illustration, of determining just how many hours of economics should be given in exchange for a suit of clothing. Perhaps one hour given by a master of the subject would be sufficient, whereas it might take a dozen hours of teaching by one who knew less of economics. The tailor, in our example, would probably not be able to decide the true value of the service which the teacher is offering, whereas the head of an economics department in a large university could appraise this particular service much more satisfactorily. Certainly the tailor would hardly be prepared to express the value of suits of clothing in terms of the many different kinds of economic goods that would be offered him under conditions of barter.

Or suppose that our instructor wishes to buy not a suit of clothing but a plate of ice cream. Shall he offer to the ice-cream dealer (say) two minutes of economic teaching? This would seem at first thought to be absurd, and yet he could scarcely afford to give more than two minutes in exchange for the ice cream, if his time were as valuable under a system of barter as it appears to be in a money economy. And, of course, the amount of good which the ice-cream dealer would derive from a discussion of that length would probably be almost nil.

There is the further fact that the services of this instructor must be used day by day if they are to be of any good. It is impossible for him to save up his teaching for a month, and then dispose of it all in one day as he might with material goods. Consequently, we may say that his services are perishable; and this is true not only of services but also of many kinds of material goods throughout economic society.¹

Advantages of Indirect Exchange. Because of the inconvenience of barter exchange and the impossibility of carrying it on satisfactorily, we now usually employ either *money exchange* or *credit exchange*. In money exchange, the instructor of our illustration is paid in (say) dollars, and then, with each of these dollars or portions of dollars, he purchases from someone else those things which he needs for his comfort and well-being. Money is in effect a common denominator to which we reduce all commodities and services. Its conveniences are many, as we shall note in our discussion of money in the next chapter.

One of the greatest of these conveniences lies in the fact that money will be readily accepted by all members of an industrial society. Our instructor has no difficulty at all in getting the tailor to accept money in exchange for a suit of clothing, since the tailor may readily exchange these dollars for things which appeal to him more strongly than economic training. The instructor's difficulty of splitting up his specialized service

¹ An interesting example of modern exchange by barter is afforded by the Barter Theatre, of Abingdon, Virginia, to which admission may be gained by persons who present, at the box office, bread, cakes, fruit, vegetables, fowls, dairy products, and other commodities that are acceptable to the management.

into portions small enough to buy the plate of ice cream easily has also disappeared. Instead of a few minutes of economic discussion, he pays the dealer fifteen or twenty cents from his money income. The number of transactions of these kinds which are daily taking place results promptly in the establishment of definite prices, expressed in terms of money, for all commodities and services. Thus, there is no difficulty in finding out how much the instructor should give for the suit of clothing. The price has already been established at, let us say, \$50.

Finally, there is no need for the instructor to search for sellers who are willing to accept economics for their goods, since he may dispose of his services at a central point, a college or university, to which come buyers anxious for this particular service. In the absence of money exchange, it is entirely possible that these students of economics, eager for knowledge of the subject, would come to the university prepared to pay for their instruction in potatoes, farm machinery, street paving, medical service, and other kinds of desirable commodities and services which, however, would not be needed or accepted by the instructor. But in a money economy, they pay their tuition in dollars, some of which the instructor receives in payment for the service he renders.

Credit Exchange. Money exchange is a form of indirect exchange, in contrast to barter or direct exchange. A second type of indirect exchange is that which is carried on by means of credit. In recent years the amount of business transacted by credit has increased tremendously. Money exchange consists of giving money in return for commodities or services, whereas credit exchange consists of giving in return for commodities and services a promise to pay at some future date. The principle, of course, is precisely the same. When money is paid for a certain article the seller receives immediate purchasing power which he may use today if he likes. The only difference in credit exchange—that is, when a promise to pay at a future time is given—is the postponement of the actual transfer of purchasing power until the date stipulated in the agreement. Even this distinction is less important than at first sight it might seem to be, because in many instances it is possible for the seller of goods to convert the credit immediately into purchasing power by selling it to someone engaged in a particular line of economic activity—that is, in the purchase and sale of credit instruments such as promissory notes, or promises to pay. Nevertheless, credit exchange is in the nature of an incomplete transaction, since only half of the exchange has taken place, the other half remaining to be performed at another time.

If a farmer should buy an automobile, giving in payment tons of hay or bushels of wheat, he would be engaging in barter, or direct exchange. If he should pay cash for the car, it would be a case of money exchange, one type of indirect exchange. If he should get possession of the car by

signing a contract in which he agreed to make twelve monthly payments covering the amount of his purchase, it would be an instance of credit exchange, a second type of indirect exchange.

The Use of Money in Exchange. There is one point in relation to money which must be borne in mind throughout the entire study of economics. It has been mentioned before, but can scarcely be overemphasized. This is that money is essentially a means of exchange, and that ordinarily it is not desired for any purpose other than to exchange it for something else. If, for instance, the instructor in our example receives \$100 a week, this money is meaningless except as it provides the means to secure the economic goods he wants. In all probability, he would work without a money salary if he were guaranteed the commodities and services essential to a good standard of living. And the *number* of dollars he receives is likewise of no significance, except as it is translated into purchasing power. He would just as soon have \$50 a week as \$100, if the \$50 would buy as much in the way of commodities and services as the \$100 would buy. People do not desire money for the sake of the money itself, but for what it will buy.

These observations are made simply to emphasize the point that what men do is deliberately to create surpluses of commodities and services which, in the final analysis, they exchange for commodities and services created in surplus by other producers. Most of our economic thinking will be simplified if we can forget that money is ever resorted to in economic transactions. There are times, of course, when our economic reasoning relates to money, but in most instances (as we have observed before) it has to do with commodities and services.

The Gainers Through Exchange. The question frequently arises as to who benefits when an exchange takes place. If, for example, I trade a fountain pen for a pocket knife, do I or does the other trader win? The answer is that in every free trade both parties expect to gain and ordinarily do gain. Having voluntarily given up the fountain pen in exchange for the knife, it is obvious that I am getting something which I would rather have than the thing I give up. The same remark applies to the other party in the trade.

If, however, I should conceal the fact that the fountain pen leaks, or if the other party professing to trade a good knife in reality trades one which has a broken blade, one of the traders may get the worst of the bargain. This, however, is not a trade but a swindle, since the true condition of the pen and knife was not set forth before the transaction took place. This question of exchange will arise again in connection with our discussion of international trade. For the present, it is enough to say that exchange consists of giving up things which are desired less by the person relinquishing them than are the things which he receives in return.

SOME AGENCIES OF EXCHANGE

In direct exchange, or barter, the surpluses of some producers are exchanged for those of others, in order that they may be consumed by persons for whom they have greater utility than they have for the original owners. In indirect exchange, likewise, the problem involved is the transfer of economic goods from the original producer to the ultimate consumer.

Owing to the great size and complications of our modern economic society, this transfer is sometimes a very involved process and requires the assistance of many intermediate agents. The process is often referred to as the "distribution of goods"; and there is no objection to the use of this term, provided only it is not confounded with the "distribution of income" which (as we have seen) has to do with the division, among the owners of the factors of production, of the economic goods or "product" which these factors have jointly made.

Functions Performed by Agencies of Exchange. The parts played by the several agencies of exchange may be made clear through the use of an illustration of comparatively simple exchange. A Virginia apple grower has picked and barreled his season's crop. He has, let us say, 5000 barrels of apples to dispose of. How shall he get them into the hands of the consumers? Clearly not by direct exchange, for the delivery of small quantities of apples to many thousands of housewives would be expensive and hopelessly drawn out. Several better methods are open to him. We may suppose that he has decided upon a plan often followed by fruit growers, that is, to retain ownership of the fruit until spring, when prices are likely to be higher than in the fall, and then to dispose of the crop through a commission house.

But this is an arrangement in which he requires assistance. He calls upon some of the agencies of exchange for help. *Form* utility the farmer has already created, but *time*, *place*, and *possession* utility must be added before the apples are available for the consumers, that is, before they have been *completely produced*. Lacking storage facilities of his own, our farmer arranges with a storage concern in Washington to hold the 5000 barrels of apples from September until April. Thus time utility is created, for the apples will be more desired in April than in September, owing to the greater scarcity of the fruit in the spring months.

But the crop must be transported from the farm to the storage house; and this necessity entails, first, a transfer by truck to a nearby railway station, then a railway shipment to the city, and finally another transfer from the Washington freight depot to the storage plant. Each of these three steps in the journey, which may or may not have been performed by separate agents, adds place utility to the product, for the apples have made progress toward the ultimate consumer.

Having running expenses to meet, such as wages of labor, taxes, and

so on, the farmer secures from his banker a loan to carry him over until the sale of the apples in the spring brings him an income. Since an immediate sale of the crop in the fall would have been necessary had the loan not been forthcoming, the banker must be credited with a part in promoting the storage; that is to say, he has aided in the creation of time utility. Moreover, the crop itself or the building in which it is stored (or both) will ordinarily be insured, so that the insurance company also is entitled to some credit in connection with time utility.

With the coming of spring, the apples are delivered to a commission merchant, sold by him to wholesalers (perhaps in hundred-barrel lots), thence to the retailers by the barrel, and finally to the consumers by the half- or quarter-peck. The commission man, wholesalers, and retailers are all merchants, and every transaction they carry on constitutes a creation of possession utility since each sale brings the product closer to its final destination, which is its possession by the consumers. It is probable that, in connection with these several sales, new place utility also was added, since a sale would usually involve the physical transfer of the goods also, in the case of a commodity such as we are now considering. (It would not be true, of course, in the sale of land—and other examples could be cited.)

In the case of many commodities, the goods would be advertised—another contribution to possession utility. Or they might be bought by speculators in anticipation of an advance in price, which would be an addition of time utility. Very important throughout the whole process is the use of money and credit, which will be described in detail in later chapters. These various agencies of exchange, it may be said, would find little or nothing to do in a primitive society, but it is inconceivable that an extensive economic order, such as we have today, could be carried on without their assistance.

Exchange, Marketing, Distribution. The activities included in the “young profession of marketing”² are essentially the same as the functions of exchange outlined above, as may be seen by reference to any of the standard textbooks on the subject.³ The “marketing functions” stressed in these books are (1) “those involving transfer of title,” which are the equivalent of the theoretical economist’s *possession* utility, and (2) “those involving physical supply,” with special emphasis on transportation (*place* utility) and storage (*time* utility). The terms “exchange” and “marketing” may therefore be used interchangeably, with little if any loss of accuracy; and to these two may safely be added a third, synonymous term—“distribution”—provided only that this distribution of *goods* is not confused with the distribution of *income*.⁴

² *Annals of the American Academy of Political and Social Science*, May, 1940, p. xi.

³ E.g., C. F. Phillips, *Marketing*, Boston, Houghton Mifflin Company, 1938; P. D. Converse, *Essentials of Distribution*, New York, Prentice-Hall, Inc., 1936.

⁴ Cf. chaps. 18 to 23 (vol. I).

Costs of Exchanging Goods. A great deal has been written about the high cost of exchanging, marketing, or distributing goods; and this cost is said to result, in turn, in the high cost of living. It is sometimes urged that the existence of large numbers of "middlemen," each demanding his share of income, needlessly increases the selling prices of many commodities.

The Twentieth Century Fund has made an extensive study of the cost of *distributing* economic goods, as compared with the cost of *producing* them in the first place.⁵ These investigators began by grouping together, as "production," all activities going into the creation of form utility, and as "distribution" the efforts involved in the creation of place, time, and possession utility. Allocating the 66 billion dollars spent for finished goods in 1929, they found that production cost 27 billion and distribution 39 billion dollars. This means that, on the average, approximately 40 per cent of the money spent that year for finished goods went to the producers while almost 60 per cent went to the distributors.

An average of this sort admittedly conceals many and wide differences in *production* and *distribution* costs as between commodities. In general, as is shown by data for more recent years, it costs more to get foodstuff to the ultimate consumer than to distribute manufactured goods. For example, the study of the Twentieth Century Fund indicates that distribution costs in the past decade accounted for the following proportions of retail prices of the goods listed: Cabbage, 82 per cent; carrots, 82 per cent; oranges, 73 per cent; shoes, 48 per cent; gasoline, 56 per cent;⁶ and cigarettes, 52 per cent.⁶ But the distribution costs of foodstuff are sometimes low (for example, 34 per cent for eggs), and those for manufactured goods are sometimes high (as in the case of rye whiskey, 79 per cent).⁶

It is the publication of figures such as these that arouses discussion as to whether we are not paying too much for the transfer of goods from the farm or manufacturing plant to the consuming public. The question is more easily asked than answered. The distribution costs of many commodities do seem to be disproportionately large. But if they are so in reality, why do not more capable business men enter the field, eliminate the wastes of distribution—if there are wastes—and thus undersell our present-day enterprisers? In some cases, the attempt is being made with varying degrees of success. But the benefits of "manufacturer-to-consumer" exchange are often more attractive in prospect than in practice.

The fact is that the consumer cannot, with any degree of satisfaction, deal *directly* with the manufacturer. If goods are to be manufactured cheaply, they must usually be made on a scale vastly larger than would be necessary to meet local needs alone. Some consumers, then, are too

⁵ See Paul W. Stewart and J. Frederic Dewhurst, *Does Distribution Cost Too Much?* New York, Twentieth Century Fund, 1939.

⁶ Taking no account of taxes on the commodity.

remote to be able to buy at the factory. And if they purchase through stores set up by the manufacturer, they are still, in effect, buying from a retailer (a distributor), even though the shop bears a manufacturer's name.

Unquestionably there is waste in distribution just as there is in the earlier stages of production, and perhaps even to a greater extent; and in both instances it should be done away with as thoroughly and speedily as possible. But there is a tendency to underestimate the services rendered by our agencies of exchange. It is easy enough to see that the baker is a productive agent. It is more difficult to give full credit to the truckster who hauls bread, and the grocer who sells it over the counter, simply because they are not creators of form utility. But the promptness and convenience with which one may secure bread depend upon the services rendered by the truckster and grocer quite as much as upon the productive effort of the baker.

The laborer is worthy of his hire, and the distributor who performs a necessary function is entitled to payment. Without him, specialization as we now have it would be impossible. Perhaps the best evidence of his usefulness—though far from conclusive evidence—is our inability thus far to oust him, even though we recognize that prices are high and may suspect that the middleman is in some way responsible.

TWO ECONOMIC FALLACIES

Two misconceptions relating to exchange may be discussed briefly at this point. The first of these is referred to as the "keep money at home" fallacy, and the second is the "make work" fallacy.

"Keep Money at Home" Theory. The idea that money should be kept at home rather than spent abroad is one which has been inherited from theorizers of the past. The falsity of the theory has been demonstrated time and again, and yet there are today business men, politicians, and others who apparently believe implicitly in its soundness and who argue vigorously in its defense.

The theory is usually expressed in about these terms: People of a given community—whether a town, a state, or a nation—should buy goods at home instead of bringing them in from the outside. By buying goods at home, home industries are encouraged, local business men prosper, there is plenty of employment for workers, and, as a consequence, prosperity for all. But if goods are purchased away from home, there is a lack of business for the home industries, and consequently a lessened demand for workers in local shops and factories.

This is the way the argument runs, but students who have followed carefully the line of reasoning in our discussion of exchange will realize that the "keep money at home" theory is a fallacious one. Buying goods means giving money, or purchasing power, in exchange for commodities

or services. And the person who receives this purchasing power will use it, in turn, to buy commodities and services which he desires. In other words, every time we buy economic goods we engage in a trade, although it is more often indirect trade than direct barter. In every free trade, as we have seen, both parties benefit. It is obvious that we gain most when we spend our money where we get for it the greatest possible return in the way of commodities and services. If a distant merchant gives more or better goods than the local merchant for the same money, or the same goods for less money, certainly it is foolish for buyers to purchase their goods locally. If local industries are not able, in the long run, to compete with industries at a distance, then it would be economical to allow them to pass out of existence, since they have shown an inability to survive in the face of competition. Indeed, every plea to keep money at home is a confession of weakness on the part of those making the plea, for money will stay at home without urging if only it can be spent there as advantageously as away from home.

An interesting side light on the "keep money at home" theory is that those who preach it loudest frequently practice it least. The campaigns that dilate upon the dire consequences that will follow upon buying away from home are usually financed largely by the merchants of the town. But do these same merchants buy locally and thus keep money at home? Sometimes they do, to be sure, but only when local manufacturers and wholesalers will sell to them more cheaply than the manufacturers and wholesalers of other cities. In other words, they exhibit a pronounced tendency to do precisely what the consumer is inclined to do—that is, to spend their money where it will bring them the largest quantity of economic goods per dollar of expenditure. All they ask, of course, is to be allowed themselves to send money away from home and bring in goods which they can sell, at an ample profit, to people whom they have "educated" to think it disloyal and unpatriotic and—most perplexing of all!—uneconomic to buy anywhere but in the old home town.

Let us examine, for a moment, a town in which this fallacy has made no headway, and see what is happening in the way of exchange. Goods are being made in this town, but they are goods that the town is equipped to make advantageously. They are goods, therefore, that can to some extent be sold locally without recourse to methods of high-pressure salesmanship, since they are reasonably priced. But they can be sold also—and probably are sold chiefly—in other towns, again because they are made advantageously and the price is therefore low as compared with the prices of similar goods made less advantageously elsewhere. As finished goods move out of town, money flows in to pay for these goods, but some of this money flows promptly out again in payment for raw materials which must be brought in as the basis for more finished goods. People working in factories buy some goods at local stores; possibly they spend part of their

wages with Sears, Roebuck and Company or Montgomery Ward and Company, and thus *send money out of town*. But at the same time their employers are selling commodities that these people have helped to make—to Sears, Roebuck and Company, or Montgomery, Ward and Company, or some other out-of-town dealer—and thus *money is brought back into town*. Through these and similar transactions, money flows back and forth. If it goes out, it just as surely comes back again; and every time it facilitates an exchange between two parties, each of whom is performing some economic act that he is especially well fitted to perform, the money serves, as someone has well said, as a lubricant to the economic machine.

Keeping money at home means doing business only with the home folk, and not with those outside the community. Any group that adopted such a policy rigidly would, of course, be self-sufficient, and it would be bound to suffer in two ways. First, it would have to get along without some kinds of goods that it would like to have, since no community has yet been able to supply itself with everything it needs and wants, without assistance from other communities. Second, it would have to get along with smaller quantities of goods, since it would be making disadvantageously some goods which, had it not chosen isolation, it could buy cheaply from other communities equipped to make these same goods advantageously. It is very likely that such a community would have *more work to do* than before, but it seems quite certain that it would have *less of economic goods*. Anyone, then, who supposes that the goal of economic society is the *creation of work* is carrying his ideas to a logical conclusion when he advocates keeping money at home; but no one who thinks of the *creation of goods* as the goal should have difficulty in seeing that this goal is more quickly and more completely reached by cooperation between communities than by each community trying to be independent of every other community.

The people of a community as a whole are not injured by sending out money and getting commodities and services in exchange, though some individuals may suffer and be compelled to turn to new fields of production. The fact that money is spent indicates that the spenders are getting for it something which they prize more highly than the money itself. The fact that it is spent *abroad instead of at home* shows that local sellers offer less in exchange than sellers at a distance. All that happens is that money goes out and commodities and services come in—more commodities and services than the community would have, had the money stayed at home by being spent there. In other words, there is released from the home town money which has no significance except as it is exchanged for goods, material or non-material; and there are brought into town economic goods which are capable of being consumed immediately or in the future, and which therefore yield genuine satisfaction.

Nevertheless, we are constantly admonished to patronize the neighborhood druggist, to support local merchants instead of mail-order houses,

to buy articles manufactured in the home city, and to use goods made in the United States rather than those manufactured abroad. Political campaigns are sometimes waged on the basis of a protective tariff. And yet a tariff of this kind is simply an artificial means designed to force people to buy goods at home, rather than get them from a foreign country where the goods could be had more cheaply.

"Make Work" Fallacy. The second error into which many persons fall has been termed the "make work" or "lump of labor" fallacy. The theory here is that there is only a certain amount of work to be done in a community, and it should be spread out so as to keep all workers employed. If people are out of employment, it is thought by some that the wise thing to do is to create work so that they may be employed. If, for example, men are idle in the winter time, it is regarded as a great blessing to have a heavy fall of snow so that these men may be able to earn an income.

From the economic point of view, it would be much better, of course, to put them to work shoveling dirt in the building of a subway instead of clearing snow from the sidewalks. If it is desirable to supply work to unemployed men at all costs, one could easily justify the deliberate destruction, by fire, of all, or a large part, of the buildings of New York, Chicago, or Philadelphia. An action of this kind would provide an abundance of work for builders of all types, and would be just as sensible as praying for snow in order to give employment to the unemployed; and yet there are few who would be so rash as to suggest that the kindling of such a fire would be desirable.

The "make work" fallacy is one which is said by some students of labor problems to be an actuating force among labor unionists. Some unions definitely set an amount of work to be done in a given time. Although labor leaders usually deny the charge, it is true that workers have sometimes decided that just so many bricks may be laid in a day, or so many cigars, and no more, manufactured in a given number of hours. A restriction of output of this kind is often caused by fear on the part of the workers that there will not be enough work to go around. Consequently, to make their work last longer they do less of it each day, although demanding, of course, a full day's pay. In like manner, they oppose the introduction of labor-saving machinery on the ground that it would reduce the amount of employment available for hand workers.

Those who hold and express the opinions outlined above either have a mistaken notion of what exchange really is, or are arguing from the short-run point of view. The error arises through overlooking the fact that whenever commodities or services are created, they themselves constitute the purchasing power with which other commodities or services may be obtained. If, then, the unemployed got busy and made some article which the general public wanted, that article could be exchanged for the things which they themselves need. And, since human wants are capable

of practically indefinite expansion, there should be plenty of opportunity for productive work, runs the argument. The difficulty, however, lies in *getting the opportunity* to make the thing which others are willing to buy. Since industry is conducted on a basis of workers employed by manufacturers and others, the workers are dependent upon employers for an opportunity to make those articles which can be exchanged for the commodities and services necessary to their well-being.

But employers will not manufacture such goods unless there is a demand for goods of this type; and oftentimes articles of a particular kind are manufactured in larger quantities than the actual demand warrants. As a result of an overproduction and accumulation of automobiles or radio sets, factories devoted to the manufacture of goods of these kinds may temporarily be closed down. This is exactly what happened in the Ford plant and other automobile factories some years ago. It is frequently said that there can be no such thing as *general overproduction*, since the wants of human beings are unlimited. But there can certainly be *more goods of a given kind* manufactured than will be taken from the market at a price sufficiently high to cover all costs of production, owing to the fact that manufacturers sometimes overestimate the demand for a particular type of goods. The word "demand" is here used to include not only the desire for an economic good, but also the possession of sufficient income to permit its purchase.

Whenever a man produces a good *which other people want and can afford to buy*, he creates purchasing power. For he can take his good and exchange it for some other commodity or service; and in so doing he, in effect, *purchases* something with the good he has made. It follows that there can never be overproduction so long as he and others produce the right kinds of goods, and each in the right quantity. When, a number of years ago, cheap automobiles were for several months a drug on the market, the situation did not arise from too much production, but from too great production of low-priced cars. If the productive power used in manufacturing the surplus stock of cheap cars had been turned into the manufacture of, say, a strikingly new and advanced model, this new car would probably have sold in fairly large quantities to persons of wealth. Until human wants have been completely satisfied, there can be no such thing as *general overproduction*, though, as we have seen above, there may be and often is *misdirected production*—that is, the production of more goods of a certain kind than people wish to possess or are able to buy.

But fine distinctions between general overproduction and misdirected production are not likely to interest a worker who is confronted by a concrete problem which may be expressed in the form of the question: "Where can I secure employment?" Though, from the social point of view, there is no economic justification for stretching out a task, yet from the practical, individual point of view no further justification is needed

than the fact that if the worker proceeds at a goodly pace, he will soon be out of a job, whereas, if he restricts his output, he may have steady, continuous employment. Furthermore, the shovelers of snow in our illustration are amply justified in giving thanks for the jobs that have been sent them; for, though the snowstorm has brought no economic gain to society as a whole, these individual workers have been enabled to secure purchasing power which may be the means of warding off starvation.

Of course, if all workers in society were to increase their efforts and, as a result, their output, there would be more commodities and services for all, and the scale of living of all members of society could be raised. Moreover, there would be no difficulty in finding a demand for the additional goods, provided care were taken to produce the kinds of commodities that were wanted, since (1) human wants are far from being completely satisfied, and (2) every good produced constitutes in itself a demand for other goods. For example, if production of all kinds were doubled, a cigarmaker who now owns an automobile could have a second car or, if he preferred, could have in its stead a host of other less costly items, such as a radio set, a dress suit, a vacation at the seashore, and so on. These additional commodities and services would be his reward for having doubled his production of cigars.

But the scheme would work equitably only if there were a *general* increase in production. If only the cigarmakers were to double their output, the effect would be a much lower price for cigars, and smokers would benefit correspondingly. But there would be no gain for the cigarmakers, since the goods which they buy would not have increased in quantity and therefore would not have gone down in price. Consequently, though it is quite true that each of us *should* produce as much as possible, there is no assurance of personal benefit unless there is a general movement in the direction of maximum production. From the purely selfish point of view, restriction of output may often be a wise practice to follow.

And so, in applying the label "economic fallacies" to certain theories or ideas which seem to involve unsound reasoning, we should bear in mind the fact that these theories, while fallacious from the point of view of economic society as a whole, and in the long run, may be entirely sound, as looked at by the individual business man or worker, and considered as short-run phenomena. Since self-interest is a familiar characteristic of present-day economic society, it is not surprising that individuals sometimes follow courses of economic action which seem likely to benefit them in a material way, even though they do so at the expense of the general public. There is no lack, in current economic life, of examples of conflict between individual and social interest.

1. It is said that exchange goes hand in hand with specialization. Explain the relationship between the two.
2. Why would it be difficult, if not impossible, to carry on present-day exchange by means of barter?
3. In what ways does indirect exchange solve the difficulties connected with barter?
4. Money is referred to as "a common denominator to which we reduce all commodities and services." How does money as "a common denominator" facilitate exchange?
5. Distinguish between "money exchange" and "credit exchange."
6. Classify "barter," "money exchange," and "credit exchange" as, respectively, *direct* or *indirect* exchange.
7. "People do not desire money for the sake of the money itself." Explain.
8. How is it possible for a gain to be realized by both parties to a trade?
9. In modern economic society, exchange is sometimes a very involved process. Name some "agencies of exchange" that assist in the process.
10. Why must care be exercised to avoid confusion if one uses the term "distribution" in speaking of the exchange of goods?
11. Recalling the definition of "production," state whether "agencies of exchange" may properly be thought of as producers. Explain.
12. Comment on the relative cost of *production* and *distribution*, as indicated by examples cited by the Twentieth Century Fund.
13. Why is "manufacturer-to-customer" exchange difficult to put into successful practice?
14. Without the assistance of agencies of exchange, "specialization as we now have it would be impossible." Defend or refute this statement.
15. State briefly the usual argument advanced in support of the "Keep Money at Home" theory.
16. "It is obvious that we gain most when we spend our money where we get for it the greatest return in the way of commodities and services." Does this mean buying at home or away from home?
17. Show the connection between a protective tariff and the "Keep Money at Home" theory.
18. According to the "Lump of Labor" theory, there is only a certain amount of work to be done in a community. Is this true? Why or why not?
19. How may a belief in the "Make Work" theory lead to restriction of output on the part of workers?
20. How may the expansibility of human wants be used in proving the fallacy of the "Make-Work" theory?
21. Distinguish between "general overproduction" and "misdirected production."
22. Why is it impossible for "general overproduction" to exist in the long run?
23. How could the scale of living of all members of society be raised?
24. "There is no assurance of personal benefit [through an individual producing as much goods as possible] unless there is a *general movement* in the direction of maximum production." Explain.
25. "From the purely selfish point of view, restriction of output may often be a wise practice to follow." Why?

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The Principles of Money

WE HAVE MADE SEVERAL REFERENCES IN PRECEDING CHAPTERS TO THE usefulness of money in facilitating the process of exchange. We shall now go into the subject at greater length, describing the nature of money and explaining the functions it performs in a highly developed economic society.

MONEY IN THE UNITED STATES

Since most of our illustrations will be drawn from monetary practice in this country, it will be helpful to have before us a list of the several kinds of money that play a part in our monetary system. They are as below:

TABLE 34. KINDS AND QUANTITIES OF MONEY IN THE UNITED STATES^a
(OCTOBER 31, 1947)

Gold.....	\$22,294,269,675
Gold certificates.....	(21,091,368,828)
Standard silver dollars.....	493,462,269
Silver bullion.....	1,933,480,561
Silver certificates.....	(2,238,970,492)
Subsidiary silver.....	930,916,455
Minor coin.....	353,090,960
United States notes (greenbacks)	346,681,016
Federal Reserve notes.....	25,208,302,775
Federal Reserve bank notes.....	390,877,695
National bank notes.....	105,213,460
 Total.....	 \$52,056,294,866

^aFrom *Circulation Statement of United States Money—October 31, 1947*, issued by the United States Treasury Department. The figures in parentheses are not included in the total, since they are included in other items in the table. Omitted from the table are treasury notes of 1890, which are included in the government statement but “are being canceled and retired on receipt.” This item is of slight importance, amounting to little more than one million dollars.

Many people who have been using American money for years are surprised to learn that we have so many kinds of acceptable currency. A few words of explanation about each of these items will help to clear up the situation. Separating the items into two groups (metallic money and paper money), we shall examine them briefly. Our new grouping gives us the following outline:

I. METALLIC MONEY:

- A. Gold bullion
- B. Standard silver dollar
- C. Silver bullion
- D. Subsidiary coin:
 - 1. Silver:
 - a. Half-dollar
 - b. Quarter-dollar
 - c. Dime
 - 2. Other metals (minor coin):
 - a. Five-cent piece (of copper and nickel)
 - b. Cent (of copper, tin, and zinc)

II. PAPER MONEY:

- A. United States government obligations:
 - 1. Gold certificates
 - 2. Silver certificates
 - 3. United States notes (greenbacks)
- B. Bank obligations (guaranteed by United States government):
 - 1. Federal Reserve notes
 - 2. Federal Reserve bank notes
 - 3. National bank notes

Gold Bullion. Gold is the basis of the monetary system of the United States, and every piece of money, whether metallic or paper, is measured nominally in terms of the "gold dollar." Prior to 1934, the dollar was defined as 25.8 grains of gold nine-tenths fine. But the Gold Reserve Act of 1934 authorized the President to reduce the gold weight of the dollar by not less than 40 per cent or more than 50 per cent; and on January 31, 1934, President Roosevelt by proclamation changed its weight to 15 5/21 grains of gold nine-tenths fine. The term "nine-tenths fine" refers to the purity of the gold bullion, and means that it consists of 900 parts pure gold to 100 parts of copper alloy.

The gold coin which circulated in the United States before the passage of emergency banking legislation in 1933 actually contained 25.8 grains of gold of this degree of fineness, for every dollar of face value. But gold coin and gold bullion, as well as gold certificates, were "called in" by the President of the United States, by authority of the Emergency Banking Act of March 6, 1933. Monetary gold did not circulate extensively in the United States even before that date, but was used chiefly for bank reserves and for the payment of balances arising out of international trade. It has now been wholly removed from domestic circulation, the gold coin reduced to bullion, and the total stock is now held in the United States Treasury as security against outstanding issues of United States government paper money. However, it can still be obtained, in quantities and at times approved by the Secretary of the Treasury, for use in international

trade. Despite the fact that gold no longer circulates as money in this country and that other forms of money are no longer redeemable in gold, *the dollar continues to be defined as a specified amount of gold*, and this amount is at present 15 5/21 grains nine-tenths fine.

Standard money is money which contains the amount of metal necessary to make its value as bullion exactly equal to its value as money. Since gold coin and gold bullion have been the only forms of money in our monetary system having a bullion value exactly equal to their money value, they have constituted the only strictly standard money we have had. The restrictions that were placed upon the use of gold in 1933 brought about a situation in which there is no standard money in general circulation in this country, though there is a large stock of gold bullion in the United States Treasury.

Standard Silver Dollars. Our so-called standard silver dollars are a relic of the bimetallic period of the country's monetary history, when the silver dollar, as well as the gold, was equally valuable as money and bullion, and was therefore genuinely "standard." The silver dollar contains 412.5 grains of silver nine-tenths fine, and is now worth as bullion only about 54 cents. This being the case, it might properly be placed under the classification of "subsidiary coins," which will be dealt with in a later section; but we have followed the time-honored custom of giving the silver dollar a separate heading.

Silver dollars pass freely from person to person in certain parts of the country, particularly in the Far West, where they seem to enjoy higher favor than paper dollars; but, because of their weight and bulk, they are extremely unpopular in some sections of the United States. Of the 494 million silver dollars in existence on October 31, 1947, only 151 million were actually in circulation. The others were held in the Treasury, and silver certificates circulated in their stead.

Silver Bullion. This item is of recent origin, having arisen almost wholly out of the operation of the Silver Purchase Plan, which will be described later in the chapter. We shall see that the government can make about \$1.43 worth of silver coin from every dollar's worth of newly mined American silver bullion that it buys. Hence, the purchase of silver leads to a large "profit" to the government, and has led to the accumulation of silver bullion. This stock of silver (which may be expected to increase materially with the passage of time) may later be put into circulation through coinage or through the medium of silver certificates.

Subsidiary Coins. Subsidiary coins are issued by the government because of the need for coins smaller than a dollar in a host of everyday transactions. Silver is used for the coins of larger values, such as the half-dollar, quarter-dollar, and dime. Its use in coins of lesser value than the dime would result in pieces of money so small as to be extremely inconvenient. Consequently, the five-cent piece and cent (which are often called "minor coins" or "tokens") are made chiefly of copper.

Like the silver dollar, subsidiary coins are much less valuable as bullion than as money, and consequently are not standard money.

Gold and Silver Certificates. Gold certificates bear a close relationship to gold coin and bullion, and silver certificates to standard silver dollars, since they are issues of paper money certifying the actual deposit of the gold or silver, as the case may be, with the Treasurer of the United States. The *gold certificates* are rather closely held by the Treasury and Federal Reserve banks, and of the total of some 21 billion dollars' worth in existence only about 47 millions are "at large." Even these are not actually in circulation, but probably have been destroyed, mislaid, or are in the possession of those who do not know, or have disregarded, their legal obligation to turn these certificates over to the United States Treasury in exchange for other money. Prior to 1933, gold certificates were redeemable in gold upon demand, but they can now be redeemed only by Federal Reserve banks at the discretion of the Secretary of the Treasury. Furthermore, they are redeemable only "for uses authorized by law."

Silver certificates are allowed to circulate much more freely. About 9 per cent of all silver certificates are held by Federal Reserve banks, the other 91 per cent or about 2 billion dollars' worth) being used in everyday business transactions. Moreover, they are readily redeemable at the Treasury in silver dollars.

United States Notes (Greenbacks). United States notes, which are better known as "greenbacks," are a government obligation which dates back to Civil War times. Issued in 1862, they had for a time a value of only 35 cents on the dollar. From 1879 to 1933 they were convertible into gold, and the Treasury maintained a fund of about 156 million dollars in gold for the redemption of these notes. Relatively few, however, were presented for redemption, and they circulated quite as freely as any other American money. The gold redemption fund referred to above is still intact, but is not being used for paying off these notes. However, United States notes are redeemable in lawful money at the Treasury. They are an interesting example of inconvertible paper money made convertible into gold, and later declared inconvertible.

Bank Notes. The several kinds of paper money that have been described up to this point are issued by the Treasury and are obligations of the United States government. Bank notes are also obligations of the government in the sense that their redemption in lawful money is guaranteed, but they are issued by national banks and Federal Reserve banks, and not by the government itself.

National bank notes are promises to pay to the bearer in "lawful money" the full face value of whatever notes a given bank puts into circulation. They have been issued by national banks which have deposited with the Treasurer of the United States registered government bonds of specified issues up to 100 per cent of the note issue, and in addition a redemption fund of lawful money amounting to 5 per cent of the par value of the

notes issued. National bank notes are redeemable in lawful money at the Treasury or at the bank that issued them. Since August 1, 1935, they have been disappearing from circulation. As of that date, the Secretary of the Treasury called in the government bonds on the basis of which national bank notes were issued, and thus made it unprofitable for the banks to keep the notes in circulation. Several hundred million dollars' worth have since been redeemed, and yet on October 31, 1947—twelve years after the retirement of the bonds by the Treasury became effective—national bank notes to the amount of 105 million dollars were still outstanding. Presumably, this form of paper money will become progressively scarcer, and eventually disappear entirely.

Federal Reserve bank notes differ slightly from national bank notes in their nature and conditions of issue. One difference lies in the fact that the note issues of Federal Reserve banks are not limited, as are those of national banks, to the amount of the issuing bank's capital. A second difference is that Federal Reserve bank notes may be issued not only on the basis of government bonds, but also with any direct obligations of the United States, or with approved commercial paper up to 90 per cent of its face value, as security. It was the intent of the Federal Reserve Act of 1913 that Federal Reserve bank notes should gradually replace national bank notes, the latter being retired from circulation. But this change has not taken place to any appreciable degree. The national bank notes are being replaced, rather, by Federal Reserve notes, which are issued on a different basis from Federal Reserve bank notes. At present, the total face value of Federal Reserve bank notes is about three and a half times the total face value of national bank notes. Federal Reserve bank notes are redeemable in lawful money at the Treasury and at the Federal Reserve bank of issue.

Federal Reserve notes, despite their similarity in name to Federal Reserve bank notes, are issued on very different terms. They will be described in detail in a later chapter, but it may be mentioned here that prior to 1933 they were secured, up to 100 per cent of their issue, either by gold or by a combination of gold and commercial paper. In the latter case, it was required that at least 40 per cent of the total should be gold. Since the passage of the Emergency Banking Act in 1933, direct obligations of the United States may be substituted for eligible commercial paper if such substitution is approved by the Board of Governors of the Federal Reserve System, and gold certificates are now used as security in place of gold. Furthermore, the required percentage of gold certificates was reduced, as of June 12, 1945, from 40 to 25. Commercial paper, it should be added, consists of notes, drafts, and other paper obligations arising out of commercial transactions. These items also will be dealt with later. Federal Reserve notes are redeemable in lawful money at the Treasury or at any Federal Reserve bank. They comprise approximately 85 per cent of all

United States money actually in circulation—that is, outside the Treasury and the Federal Reserve banks.

Convertibility of Paper Money. We shall now examine several points of difference as between representative, convertible, and inconvertible money, with illustrations drawn chiefly from monetary experience in the United States.

Representative money is a receipt for, and promise to return upon demand, a specified amount of metallic money which has been intrusted to a responsible public authority, by whom it is to be held until called for. Thus, United States silver certificates are receipts for, and claims upon, silver that has been deposited with the Treasurer of the United States.

Silver certificates have frequently been classified as convertible money, and rightly so up to 1933, since, though they were *directly* redeemable only in silver, they were *indirectly* convertible into gold. Now that gold redemption of paper money has been suspended, it is no longer correct to say that silver certificates are convertible. Another characteristic of silver certificates is that they are backed, dollar for dollar, by the actual silver in which they are redeemable. Moreover, they are used purely as substitutes for metallic money, and not (like bank notes) as devices for increasing the amount of currency in circulation. As we have already observed, they have the advantage of being more convenient in handling than the metal, and their use prevents wear and tear on the coins themselves.

Prior to the recall of gold from circulation in 1933, gold certificates as well as silver certificates were representative money, since gold certificates were actually backed by and were redeemable in gold at the Treasury. They still have a dollar-for-dollar backing in gold, but the gold for which they call is no longer obtainable upon demand. Consequently, gold certificates do not now rate as representative money, but come under the heading of inconvertible paper money.

Convertible Paper Money. The convertibility of paper money rests upon the maintenance of an adequate reserve which may be drawn upon if redemption is demanded, and upon legal provision that the money shall be redeemed upon demand to the proper authorities. All of the paper money in use in recent years in the United States was, up to 1933, convertible into gold, either directly or indirectly. But so ample were the reserves from which redemption could be made that there was seldom an extensive demand for standard money in exchange for paper; for, strangely enough, the redemption of paper money is seldom desired unless there is fear that redemption, if requested, will be refused.

It was this fear which, in the great depression following 1929, gave rise to such unprecedented demands for gold in place of paper money that the privilege of redemption in gold was withdrawn in 1933. The metallic backing of our paper money, while more than adequate to meet the

demands of normal times, has never of course been sufficient to permit the redemption, in gold or silver, of all paper money outstanding. The payment of gold and silver certificates was fully assured by the maintenance of a 100 per cent deposit. Gold to the amount of 43 per cent was held as a reserve against the outstanding United States notes, or greenbacks. National bank notes and Federal Reserve bank notes had a monetary backing of only 5 per cent, which might or might not be gold. And the metallic security of Federal Reserve notes was usually only a 40 per cent deposit of gold. *In the final analysis, convertibility means redemption in gold if gold is demanded.* But we have not had a sufficient stock of gold to permit the redemption of all kinds of money which the government promised to redeem in gold. It is apparent, therefore, that in the face of a growing demand for redemption the only way to prevent a collapse of the monetary system was to withdraw, at least temporarily, the privilege of converting paper money into gold, the standard money of the United States.

Inconvertible Paper Money. Inconvertible paper money is currency which has no value in itself and is not redeemable in standard coin, but circulates only by authority of government. Inconvertible money (or "fiat money," as it is often called) is usually made legal tender; this fact and the confidence that people have in the promises of their government are sufficient explanation of the acceptability of a money that cannot be redeemed in coin or bullion.

Fiat money is most often issued in time of great emergency, such as war, when the printing of money appears to be the easiest way (and sometimes, indeed, the only way) to secure funds with which to meet necessary expenses. The Civil War was responsible for the issuance of greenbacks, and World War I brought upon European countries a veritable deluge of fiat money. Inconvertible money sometimes becomes convertible, as was the case with the greenbacks after an interval of seventeen years. But Russia, Germany, and Austria printed paper money in such tremendous quantities in order to meet war and post-war needs, that redemption was out of the question and the notes were repudiated. France, facing a problem that was similar but not so serious, chose to "stabilize" the franc at a fraction of its former gold value. But this, in effect, was repudiation of a large part of the obligation represented by the paper money outstanding.

A serious difficulty with fiat money is the grave likelihood of overissue, once the practice of printing this kind of money is resorted to. And when sufficient fiat money has been issued to serve as exchange media for all business transactions, fiat money alone will be used. Since it is customary to endow such money with the power of legal tender, it will theoretically circulate on a par with gold. But gold may be "called in" by the government. And even if it is allowed to remain in circulation, gold will not, in actual practice, be employed at all if an abundance of inconvertible paper

money is available. On the contrary, as we shall see shortly in our examination of Gresham's Law, it will disappear from circulation, part of it being used in foreign trade, where its purchasing power is greater than at home; part being made into articles of utility or ornament; and part being stored away against the time when it can again be used to advantage in domestic trade.

Since 1933, the paper money of the United States has been inconvertible paper money, for in that year it ceased to be redeemable in gold, our standard money. The fact that silver certificates may be redeemed in silver dollars does not alter the situation, for the terms "convertibility" and "inconvertibility" relate only to standard money, and silver dollars do not qualify as standard money since their value as money is much greater than their value as bullion.

"Total Money" and "Money in Circulation." Some kinds of money circulate freely, while other kinds do not. The total amount of money of the United States on October 31, 1947, was distributed as follows:

Money held in the Treasury.....	\$19,559,285.866*
Money held by Federal Reserve banks and agents.....	3,945,138,944
Money in circulation.....	28,551,870,056
Total money in the United States.....	\$52,056,294,866

* To avoid duplication, we have reduced this figure for gold and silver bullion actually held in the Treasury, deducting an amount equal to the total of gold and silver certificates *outside* the Treasury. Obviously, we should be guilty of double-counting if we included both the bullion and the certificates.

These figures make it clear that only about 55 per cent of the money of the United States is being used *directly* in carrying on business transactions. But this does not mean that the rest of the money is idle. Gold and gold certificates, when held in a Federal Reserve bank, permit the issuance of far more purchasing power (in the form of Federal Reserve notes or bank credit) than if they were used directly for buying goods. By using much of our money as *reserves*, instead of keeping all of it in actual circulation, we are enabled to increase enormously the funds available for conducting economic operations, as we shall see in the next chapter.

THE NATURE OF MONEY

With this picture of the kinds of United States money as a background, we proceed to a consideration of the character of money and its use in present-day economic life.

Attributes of a Satisfactory Money. Money may be defined as *anything*

that serves as a standard of values, or is generally acceptable and is used primarily as a medium of exchange. The traditional definition of money—"anything that serves both as a standard of values *and* a medium of exchange"—has not applied to United States money since April 5, 1933. For gold has not been allowed to circulate in this country since that date, and is therefore no longer a medium of exchange, though it still serves as a nominal standard of values. Hence, we have modified the traditional definition of money to meet the needs of the American situation. Gold still qualifies as money because it serves as a standard of values; and other kinds of money fall within the limits of the definition because they are generally acceptable and are used primarily as a medium of exchange. *Acceptability* is the prime essential of a good money, and this quality depends, in turn, upon a number of other attributes, namely, portability, durability, uniformity, divisibility, cognizability, and stability of value.

Many commodities have been used as money in the past, but have been discarded for this purpose because they failed to possess one or more of these attributes. Tobacco, which was quite generally used as money in colonial Virginia, was too bulky and heavy to be readily portable; and it also lacked stability of value, for its purchasing power depended upon the size of the total crop, and this varied greatly from year to year. Cattle and sheep, though used by pastoral tribes, are not easily divisible, nor are they at all uniform. They could not, therefore, be used in small transactions, and values could not be expressed accurately in terms of these animals because of differences in size, weight, and quality. Corn and wheat have served as money at times, but are unsuitable for several reasons, one being the absence of durability, since grains are subject to deterioration. Precious stones also have been used, but they are deficient in cognizability; that is to say, it requires an expert to tell whether they are genuine or spurious.

The influence of these attributes upon the acceptability of money should be fairly obvious. If a commodity is easily carried about (portability), if it gives promise of lasting for a long time (durability), if a unit is like every other similar unit in value (uniformity), if the standard unit is separable into smaller units for use in minor transactions (divisibility), if every unit is marked so that its genuineness and value are apparent to the average person (cognizability), and if its purchasing power does not fluctuate greatly from time to time (stability of value), then—but not until then—does it become "generally acceptable" and meet the needs of a satisfactory medium of exchange.

Gold, Silver, and Paper Money. Because the articles that we have mentioned above, and many others that have been used in the past, are deficient in the qualities required of a satisfactory money, their place has been taken in most important countries by gold and silver, and by paper based upon these two precious metals. Gold and silver possess, to a high

degree, the characteristics which are desirable in money. Of the two, gold has an advantage over silver because of its higher value in relation to bulk and weight.

Gold, combining high value with slight bulk, satisfies the requirements of portability. It does not deteriorate with the passage of time, nor does it wear away rapidly through handling if it is hardened by the addition of an alloy. It presents no difficulties so far as uniformity is concerned. Though gold is readily divisible, its great value per unit of weight makes it unsuitable for small coins, so that silver, copper, and other metals are commonly used for making units of small denominations. When coined by a responsible government, gold is generally recognizable. It varies considerably in value from time to time, but is more stable than most commodities. Silver possesses these same qualities, though most of them to a lesser degree than gold; and one or the other of these two metals forms the nominal basis of every important monetary system of modern times.

The Question of Acceptability. Our definition includes paper money as well as metallic money, if only it is generally acceptable. Paper currency is very extensively used, and passes from hand to hand as freely as gold and silver, whenever there is confidence on the part of the receiver that he will experience no difficulty in passing it on to someone else, at full face value, in exchange for economic goods. But checks, drafts, and certain other negotiable papers do not fall within the definition, largely because they lack cognizability. Even a check signed by a multimillionnaire would not be generally acceptable, because the average person could not be certain that the signature was genuine and not a forgery. In like manner, a personal note (or "promise to pay") is not money, since many persons would decline to accept it on the ground that it might not be paid when due.

Legal Tender and Lawful Money. Legal tender is money which by legal declaration must be accepted by a creditor in payment of debt, in the absence of an agreement to the contrary. The power of legal tender is conferred upon certain specified forms of money for the purpose of facilitating the settlement of obligations. A refusal to accept legal tender in settlement of an obligation does not mean that the debt is canceled, but simply that the debtor need not pay interest accruing after the date on which payment in legal tender was proffered. The power of legal tender adds to the acceptability of money, since the person receiving it knows that it can be passed on to others in payment of obligations outstanding.

Prior to 1933, the question of legal tender in the United States was a complicated one, for some forms of American money enjoyed full legal tender whereas others were legal tender only for certain purposes or in limited quantities. In actual practice, however, there has been no real difficulty, since every form of our currency has been readily convertible

into any other form that might be desired. But even the academic perplexities of the situation have now been cleared away, for by joint resolution of Congress on May 26, 1933, "all coins and currencies of the United States (including Federal Reserve notes and circulating notes of Federal Reserve banks and national banking associations) heretofore or hereafter coined or issued" were declared full legal tender for all debts, public and private.

The term "lawful money" is one which we have used in the present chapter, which is in common use in monetary discussion. It is a term which requires no explanation other than the statement that lawful money is synonymous with legal tender, in so far as United States money is concerned. The two terms may therefore be used interchangeably.

Coinage. The coinage of metallic money and the printing or engraving of paper currency are almost invariably carried on either as a government monopoly or under strict governmental control. This, again, is an arrangement that contributes definitely to the acceptability of money, since it guarantees the use of metals of uniform fineness, units of standard weight, and therefore coins which will be received without hesitancy by the general populace. Coins of a given value are of uniform appearance and are easily recognized. They are struck from excellent dies in such manner as to render counterfeiting difficult. Not only are they stamped on both sides, but the edges of the more valuable coins are usually sharply "milled," as a precautionary measure against impairment of metal content by shaving or clipping. In the manufacture of paper money, fraud is discouraged by the use of special paper on which are printed or engraved intricate designs that cannot easily be reproduced by private individuals.

Policies on coinage differ with different countries. Occasionally a government aims to make a profit on the manufacture of money by charging more than enough to cover the costs of coinage; this is known as *seigniorage*. More often a charge known as *brassage* is made, this being an amount just sufficient to cover the costs involved. Or the system may be, as it was in the United States until 1933, one of *gratuitous coinage* of the standard metal. For in this country the holder of gold bullion could take it to the government mint, and there have it made into coin without charge except for the alloy which was mixed with the pure gold to give it the proper degree of hardness. Moreover, he was able to have it coined in *unlimited quantities*. This latter feature is known as the "free coinage" of gold.

But gold coin is no longer a part of our monetary system, and so we have no coinage of our standard metal. Gold may now be monetized only through its purchase by the Treasury, the seller receiving not gold coin, as was his privilege in the past, but some form of paper money in exchange for the bullion. Silver has not for many decades been "freely" coined in this country; that is, it has not been coined (as was gold prior to

1933) upon the simple request of the holder of bullion. When there has been need for more silver coins, they have been stamped from silver bullion purchased by the government for that purpose.

THE FUNCTIONS OF MONEY

Medium of Exchange. The primary function of money, as was indicated in our definition, is to act as a medium of exchange. When an economic society gets beyond the stage of barter, in which producers trade their surplus goods directly for goods of various kinds produced in surplus by others, the need for a satisfactory medium of exchange is apparent. Money, because it possesses the several attributes we have enumerated, is such a medium. Being easily exchangeable for commodities which one wishes to secure, it is readily accepted in return for goods that one may hold in excess and may therefore wish to sell. Exchange is greatly facilitated through the agency of money, for its use permits the employment of middlemen, who, though not desiring to consume certain goods themselves, are yet willing to purchase them (giving money in return) and later sell them (receiving money in return). In this manner, a producer is enabled, indirectly but conveniently, to deliver his product to the consumer. Through the instrumentality of money, moreover, services may be exchanged just as readily as material goods.

We have already noted the fact that gold has ceased to function in the United States as a medium of exchange. The monetary gold stock of this country is held in the United States Treasury, and paper money is circulated in its stead. An arrangement of this kind is satisfactory as long as public confidence in the paper money can be sustained, and this is largely a matter of keeping the amount of money issued down to a quantity that will not raise general prices unduly. But the acceptability of paper money does not ordinarily extend beyond the boundaries of the country of issue. Consequently, the settlement of balances arising through international trade (a subject which will be treated in a later chapter) is made in gold on the basis of weight.

Standard of Values. Money serves also as a standard of values, which is merely another way of saying that it provides us with a common denominator in terms of which all other commodities may be expressed and their importance in exchange easily compared. The convenience of reducing all commodities and services to this common unit is very great. If a garden hoe exchanges for two pounds of butter, it is possible, of course, to express the value of hoes in terms of butter and the value of butter in terms of hoes. But it is more convenient to express both in terms of dollars, saying, for example, that a hoe is worth a dollar and a pound of butter is worth fifty cents. Once the standard is well established and universally understood, values are automatically reduced to its

terms. Thus the statement that hoes are selling at one dollar each, and butter at fifty cents (or a half-dollar) a pound, is instantly and completely comprehensible to any person accustomed to our monetary system. The use of a standard unit (such as the dollar) makes it easy to compare the values of goods to be bought and sold.

Just because money functions as a standard of values, it does not follow that it possesses stability of value. Indeed, we have already noted its deficiency in this respect; but this is a shortcoming in which all commodities share, and some to a far greater degree than gold. Money is not, then, an unvarying standard of measurement such as the pound, foot, and bushel (which remain constant from year to year), but simply, as we have said, a common denominator in terms of which one may conveniently compare the values of different articles at a given time.

However, the establishment of a monetary standard, such as the dollar, does fix definitely the relative values of the several kinds of money included in the system. A fifty-cent piece, for instance, is always a half-dollar, even though its value as bullion is less than that of $7 \frac{13}{21}$ grains of gold nine-tenths fine. And two halfdollars will continue to have as great purchasing power as a paper dollar of any issue, a silver dollar, or one hundred cents' worth of subsidiary coin of any kind, as long as each of the several forms of money in circulation is readily exchangeable for any other form, and all forms have the power of full legal tender.

Standard of Deferred Payments. Present-day exchange consists largely of giving commodities or services, not in return for other commodities or services, or even for money, but in return for promises to pay at some future date. It is estimated that more than 90 per cent of the business of the United States is conducted on the basis of credit. But when a credit transaction takes place, some definite provision is usually made for settlement in the future and money is called upon to act as the standard of these deferred payments.

This means that an agreement is made to meet the obligation, at a specified future date, by paying in money the amount due. It is here that stability in value of money is especially desirable, since it is important that the amount of purchasing power delivered to the creditor when the obligation falls due should be the amount which, when the transaction took place, the debtor promised to deliver. Our study of price levels in a later chapter will show that, because money itself fluctuates in value, the purchasing power delivered on a deferred payment may be either greater or less than was implied in the contract, depending upon whether money has increased or decreased in value in the meantime. The fact remains, however, that money is the standard generally used; and it will continue to perform this function until the business world has been convinced of the advantages of one or other of several new standards that have been proposed for the purpose.

Basis of Credit. It is difficult to grasp the significance of money as a basis of credit without understanding the fundamentals of our system of banking, which will be described in Chapters 33 and 34. It may be said, however, that the adoption of a standard money, and its use as a reserve, permit the safe circulation of a volume of paper substitutes vastly greater than the original amount of standard money. We shall see that for every dollar's worth of gold certificates deposited as security with a Federal Reserve bank, there is the theoretical possibility of a reserve city member bank expanding credit to the extent of \$40.00. This element of elasticity is one which was not fully appreciated in this country prior to the adoption of our Federal Reserve System in 1914. It means, however, that as business expands, the volume of credit increases to meet its requirements, decreasing again when so much credit is no longer needed.

MONETARY SYSTEMS

Standard Money. Standard money, in the strict sense of the term, is money that contains the amount of metal necessary to make its value as bullion exactly equal to its value as money. If a country used nothing but standard money, there would never be any question about its acceptability so long as the standard metal was desired on its own account. For the coin could be converted into bullion by the simple process of melting, and the bullion, in turn, could be turned readily into money if a system of free coinage were in effect.

Measured by the above definition, gold bullion constitutes the only strictly standard money in this country. Silver dollars, though they were once standard and are still called by that name, are greatly underweight, and so also are all subsidiary coins. Paper money, despite its value in exchange, possesses almost no value as a commodity. The gold certificate, even though it is virtually a receipt for gold that is actually held in the Treasury, is at present inconvertible, and thus is as remote from being standard money as are the other kinds of paper money. Forms of United States money, other than gold bullion, may be called "credit money" since they represent promises to pay. This statement applies to short-weight metallic money (which includes all metallic money now in circulation) as well as to paper money.

Monometallism. For many years prior to 1933, the monetary standard of the United States was monometallic. Gold was the basis of our monetary system, and we were said to have a *gold standard*. The standard unit was the gold dollar, which was 25.8 grains of gold nine-tenths fine; there was free coinage of this metal; there was no prohibition on melting or exporting gold coin; the gold dollar was full legal tender; and all other kinds of United States money were convertible, directly or indirectly, into gold coin.

We shall later describe the system that obtains in this country at the present time. The characteristics listed above are those which marked the monetary system of the United States while it was on a monometallic gold standard. Until quite recently monometallism has been a world-wide phenomenon, and in most countries of economic importance the standard metal has been gold.

Bimetallism. But most governments, before adopting monometallism, have had some experience with a bimetallic standard. Under bimetallism, two metals—usually gold and silver—are coined upon presentation at the mint and in unlimited quantities, and both are full legal tender. As in the case of monometallism, there is no prohibition of melting or exportation. In setting up a system of bimetallism, it is necessary to decide upon a *mint ratio* to express the relative values of the two metals when used as money. The ratio adopted is naturally one that conforms very closely to the *market ratio*, which expresses the terms on which the metals exchange as bullion. If one ounce of gold, as metal, commands sixteen ounces of silver bullion in exchange, the market ratio is 16 to 1, and the same figures would ordinarily be chosen at the outset for the mint ratio.

So far, so good. And if the market ratio remained constant indefinitely, or the mint ratio could be manipulated so as to duplicate changes in market value, all would be well. But the market values of gold and silver, as of all commodities, depend upon the general conditions of supply and demand. Since both are constantly being mined, but in varying quantities, and since the demand for the metals is likewise subject to variation, their market values are constantly changing. In the year 1500 the market price of gold was about eleven times that of silver, so that the market ratio between silver and gold was 11 to 1; in 1850 it was about 15½ to 1; in 1900, 34 to 1;¹ and in 1947, approximately 50 to 1. This 1947 ratio of 50 to 1 was arrived at, of course, by comparing the market prices per ounce of gold and silver, and these prices were, respectively, \$35 and 70 cents.² The market ratio, then, lacks stability. Nor is it feasible to change the mint ratio frequently so that it will conform to the market ratio; for this would mean, among other difficulties, the circulation of coins alike in face value and yet different in their metallic content.

Overvalued and Undervalued Money. Because of the variability of the market ratio and the fixity of the mint ratio, it is next to impossible to

¹ Cf. W. H. Steiner, *Money and Banking*, New York, Henry Holt & Company, Inc., 1933, p. 81.

² Under presidential decree of April 24, 1933, the price of silver eligible for Treasury purchase, consisting of *newly mined American silver*, was made 77.57 cents an ounce. On December 31, 1937, this price was reduced to 64.64; on July 6, 1939, it was set by law at 71.11 cents for domestic silver mined after July 1, 1939; and on July 2, 1946 the price was again raised, this time to 90.5 cents an ounce. At the artificially high price the government is now paying for newly mined silver, the bullion that goes into a dollar costs about 70 cents, but melted down and sold in the silver bullion market it would bring only about 54 cents.

maintain a bimetallic standard over a long period of time. If, under a *monometallic gold standard*, an exceptionally large amount of silver were mined in 1948, the 1947 market ratio of 50 to 1 might be expected to change to (say) 51 to 1. This would represent a fall in the value of silver, attributable to the substantial increase in the quantity available. But if a *bimetallic standard* were in force, this increase in quantity would not lower the price of silver, since the mint ratio, set by law, would presumably remain fixed at 50 to 1. Under these conditions, silver would be overvalued and gold undervalued at the mint—that is to say, silver would command a higher price at the mint than on the market, and would therefore be sold only at the mint. As a consequence, the *theoretical* market ratio of (say) 51 to 1—which, as we saw above, would prevail in the presence of a monometallic gold standard—would be non-operative as long as silver could be disposed of more advantageously at the mint than on the market. Silver would tend to flow into the mint and gold to flow out, and these movements of silver and gold would likely continue until all the gold had been drained from the mint and only silver remained to serve as money; whereupon the market ratio would become operative and the mint ratio non-operative. The gold coins that had left the mint might be melted down and sold as bullion, be exported to other countries where they had greater purchasing power than at home, or possibly be hoarded in the hope that their exchange value would later increase.

If, on the other hand, gold were mined in unusually large quantities, the situation would be reversed. Gold bullion would then be brought to the mint, silver would flow out and disappear from circulation, and gold money only would be used for purposes of domestic exchange.

Gresham's Law. This tendency for money that is overvalued *at the mint* to drive out of circulation money that is undervalued, is known as Gresham's Law. The law is effective only when there are free and unlimited coinage of both metals, free melting, and full legal tender of both gold and silver. Moreover, the quantity of the overvalued money must be sufficient to meet the needs of business transactions; otherwise the two may circulate side by side.

There are many illustrations of the operation of Gresham's Law. An example which illustrates that the law is applicable to paper money as well as to gold and silver, is to be found in the circulation of greenbacks during and following the Civil War. From 1862 to 1879 these notes were not redeemable in gold. Though they had been declared legal tender, greenbacks were generally regarded as distinctly inferior to silver and gold. Persons having in their possession both metallic money and greenbacks held fast to the metal and paid in paper. Since sufficient greenbacks had been issued to carry on business operations, gold and silver were withheld from circulation and paper money was used almost exclusively. Inferior money had driven superior money out of circulation.

Gold and Silver Purchase Plans. Returning to the monetary system of the United States, we may note once more the extensive purchase of gold and silver bullion, begun by the government during the post-1929 depression.

Acting on authority given him under the Gold Reserve Act of 1934, President Roosevelt promptly reduced the gold content of the dollar, established a price of \$35 an ounce for gold, and ordered the Secretary of the Treasury to purchase gold bullion both in this country and abroad. Presumably, the purpose was to raise general prices in the United States to approximately their level in 1926, since it was thought that most of the business contracts outstanding were made when prices were at about the 1926 level and that a return to that level would aid in bringing about business recovery.³ It may fairly be questioned that the gold purchase plan raised prices as much as its sponsors had expected, but there can be no doubt that it brought an influx of gold bullion to the Treasury. The value of monetary gold in the United States was five times as great in 1941 as in 1932. This ten-year increase resulted partly from the greater value of gold (as expressed in terms of a dollar which contained fewer grains of gold than formerly), but it was attributable chiefly to large purchases of gold, both domestic and foreign, by the government.

In like manner, the Silver Purchase Act of 1934 added to our stock of metallic money. This Act declared it to be the policy of the United States to increase the stock of monetary silver until its value is one-fourth that of the total monetary stock of this country, the other three-fourths consisting of gold. The Secretary of the Treasury was authorized to buy silver until this proportion of one to three has been attained. It was estimated that it would require the purchase of about one and one-third billion ounces of silver to bring about the proportion of gold and silver aimed at by the Silver Purchase Act. Since silver mines in the United States had been producing some 25 million ounces of silver a year, this proposed change in our monetary stock was expected to provide a market for all silver mined in this country for two decades. This silver may be coined into silver dollars, or may be put into circulation through the issuance of silver certificates. In either event, the Silver Purchase Plan, if carried through to its stated conclusion, will add materially to the monetary stock of the United States. It has already increased the total amount of United States money by more than a billion dollars. Of course, every purchase of gold (under the Gold Reserve Act) requires an additional purchase of silver (under the Silver Purchase Act), if the proposed proportions of three to one are to be reached.

The present bullion content of the silver dollar (which the President of the United States has authority to lower) is 412.5 grains of silver nine-

³ The part that an increase in gold may play in raising the price level is explained in chap. 36.

tenths fine, so that one ounce of silver makes \$1.29 worth of silver coin. Since the present Treasury purchase price for newly mined American silver is 90½ cents an ounce, it will be seen that every time the government buys an ounce of silver and turns it into coin, it makes a "profit" of approximately 38½ cents.

The Managed, Inconvertible Gold Currency System of the United States. The recent changes in monetary practice in this country make it necessary to find a new term by which to designate the present currency system of the United States. Clearly, the old title—"the gold standard"—is no longer applicable, since one of its essential features—the power to redeem all forms of credit money in gold upon demand—has disappeared. Probably we can do no better than to call our present arrangement a "managed, inconvertible gold currency system."⁴

It is a *gold* system, since our standard unit, the dollar, is still defined in terms of gold, and the security back of our money consists in large part of a stock of gold bullion. However, "gold is relegated to a distinctly nominal rôle. . . . The commodity gold, consequently, may be said to function as an inspirer of confidence in money on the part of the public."⁵ Furthermore, we have an *inconvertible* system, inasmuch as none of our money in actual circulation is redeemable in the standard money, gold. Finally, the system is *managed*; that is, the quantity of money is not allowed to adjust itself on the basis of the presentation or withdrawal of gold at the mint and the issuance of bank notes of various kinds, but is presumably being managed by a central authority (the President of the United States) in an attempt to adjust the price level in such a way as to bring about the full use of the country's productive resources.⁶

Money is anything that serves as a standard of values, or is generally acceptable and is used primarily as a medium of exchange.

Standard money is money that contains the amount of metal necessary to make its value as bullion exactly equal to its value as money.

A *United States dollar* is 15 5/21 grains of gold nine-tenths fine.

Free coinage is the coinage of bullion in unlimited quantities (though not necessarily without charge) upon presentation at the mint.

Legal tender is money which by legal declaration must be accepted by a creditor in payment of debt, in the absence of an agreement to the contrary.

Gresham's Law: Money that is overvalued *at the mint* tends to drive out of circulation money that is undervalued.

⁴ This is the term adopted by Professor Ralph A. Young in *The New Monetary System of the United States* (New York, National Industrial Conference Board, Inc., 1934).

⁵ *Ibid.*, p. 29.

⁶ Cf. *ibid.*, p. 29.

1. Name the different kinds of paper money in the United States. The different kinds of metallic money.
2. What is a "dollar"?
3. What do we mean by "standard money"?
4. In view of our definition of "standard money," why do we sometimes refer to "standard silver dollars"? Explain the seeming contradiction.
5. In what way do gold and silver certificates differ from other kinds of paper money?
6. What is "representative money"? Illustrate.
7. What is "convertible money"? How is its convertibility maintained?
8. Define "inconvertible money," and give illustrations of its use in the United States and elsewhere.
9. Give a synonym for "inconvertible money."
10. Why is the use of inconvertible money generally regarded as objectionable? Illustrate.
11. Why, since the use of inconvertible money often results disastrously, do nations ever permit its use?
12. What proportion of the total money of the United States is "money in circulation"? Explain.
13. Define "money."
14. Name and describe the attributes of a satisfactory money.
15. What is the relationship between "acceptability" and the other attributes of money?
16. Is a personal check "money"? Explain.
17. How does money become "legal tender"? How is legal tender related to "acceptability"?
18. Why is it desirable that "coinage" be conducted under strict governmental control?
19. What is the meaning of "free coinage"? Of "gratuitous coinage"?
20. Four functions of money are described in the text. Name these functions, with a short explanation of each.
21. Why does money fail to perform perfectly its functions as a "standard of values" and a "standard of deferred payments"?
22. Distinguish between "monometallism" and "bimetallism."
23. Why is it difficult to maintain a bimetallic standard?
24. State and explain Gresham's Law.
25. Discuss the Gold and Silver Purchase Plans.
26. What kind of monetary system has the United States at the present time? Explain.

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Commercial Banking in the United States

ONE OF THE FUNCTIONS OF MONEY, AS WE SAW IN THE LAST CHAPTER, IS TO serve as a medium of exchange. Not only standard money but credit money (underweight coins and paper money) is useful in the performance of this function. But money, whether standard or credit, plays only a small part in the actual business transfers of the country, when compared with such credit instruments as checks and drafts. Gold, when used as a reserve against other kinds of circulating media, is a more vital factor in the business world than it could possibly be as an active medium of exchange. For its use in this way permits the circulation of a vast quantity of credit which is constantly employed in furthering business activities. It is a fair estimate to say that fully 90 per cent of our business operations are carried on through the use of substitutes for money. The check is, in present-day business, the most important of money substitutes.

Two Important Types of Credit. The need for credit arises largely from the fact that production is carried on in anticipation of demand. This means that many of the costs of production must be borne for some time before any return is realized by the sale of the product. If a silk loom is about to be discarded, then the part contributed by this loom to the last yard of cloth that is woven is a cost of production which was met perhaps some twenty years before the sale of the silk cloth. The ability to conduct an enterprise and the possession of a large amount of money do not always go together. Frequently, then, enterprisers are obliged to put their ideas to work, not with their own resources but with the aid of borrowed funds.

Let us consider, by way of illustration, the case of an energetic young man of business ability, with confidence in the future of television, but with no money of his own. Obviously, he must secure credit if he is to go into the business of manufacturing television receiving sets. The purchase or lease of land, the construction of a factory building, and the purchase of machines and tools require funds in considerable amounts. Moreover, these funds will be tied up for a long period of years, being invested in plant and equipment designed for a particular purpose. What

our would-be enterpriser needs is *investment credit*; that is, *long-term* loans, amounting to *large sums*, to be put into *fixed* capital. Such loans are usually secured through the issuance of bonds and shares of stock.

Even after the business is well established and is operating on a profitable basis, there may be times when this enterpriser will need additional funds for short periods of time. There are certain running expenses that must be met promptly, raw materials to be purchased, wages to be paid. And even though the books show a handsome profit, funds may be tied up temporarily in the form of goods manufactured and on hand, or television sets sold to wholesalers but not yet paid for. However, the running expenses of the company must be met, and without delay, so that an appeal is made for *commercial credit*, which consists of *short-term* loans, for relatively *small amounts*, to supply *circulating* capital.

SOME IMPORTANT CREDIT INSTRUMENTS

Book Accounts. Our suggestion that some of the television sets that were sold had not yet been paid for indicates that this enterpriser is extending credit to his customers, probably through book accounts. There is little credit mechanism involved in the process. Let us suppose that, in order to dispose of a substantial number of receiving sets held in stock, the enterpriser agrees to deliver one hundred sets to a wholesaler, waiting sixty days for payment or allowing 2 per cent discount for cash in ten days. This transaction now stands as an "account receivable" on the books of the seller and an "account payable" on the books of the buyer, to be canceled as soon as payment has been made.

Promissory Notes. A transaction of this kind might be handled through the use of a promissory note. This is an agreement to pay, "for value received," a stated amount of money "on demand" or at a specified time. When properly endorsed, a note becomes "negotiable"—that is, it may be bought and sold. The payee of a note (the person who is to receive payment) is likely immediately to endorse it (by signing his name on the back) and have it discounted at his bank. The process of discounting consists of the bank deducting in advance the interest charge for the period of time indicated in the note, and placing the remainder to the credit of the payee. The payee is then in a position to write checks against his account with the bank, to the full amount of this credit. An endorsement on a promissory note or check makes the endorser responsible for its payment in case the drawer of the instrument fails to make good his obligation.

Drafts, Bills of Exchange, Trade Acceptances. The *draft* is a very common device used in extending credit. This instrument appears under several names, such as *bill of exchange*, *trade acceptance*, and so on. The method of using the draft, also, is not entirely standardized. Sometimes

the draft is accompanied by a bill of lading, warehouse receipt, or other claim upon property; sometimes, again, it travels alone. At times, the transaction is handled through a *bank draft*, which is an order drawn by one bank on another. In all cases, however, the general principle is the same. A draft is an order written by one person to another, ordering that a specified amount of money be paid to a third person, sometimes (though not always) on a stated date. It follows that the familiar bank check is a form of draft.

A business transaction may give rise to the type of credit instrument shown in Fig. 39. This is a trade acceptance, a form of the draft, and

TRADE ACCEPTANCE Standard Form Approved By AMERICAN ACCEPTANCE COUNCIL New York	No. <u>453</u> <u>New York</u> <u>Oct 1, 1947</u> <div style="text-align: center; font-size: small;"> (City of Drawer) (Date) </div>	
	<u>On November 30, 1947</u> Pay to the order of ourselves <div style="text-align: center; font-size: small;">(Date of Maturity)</div>	
	<u>Sixty Thousand</u> Dollars (\$ <u>60,000</u> ^{xx} / ₁₀₀)	
	The transaction which gives rise to this instrument is the purchase of goods by the acceptor from the drawer. The drawer may accept this bill payable at any bank, banker or trust company in the United States which such drawee may designate.	
	To <u>New York-Jacksonville Transit Corporation</u> <u>Johnson Airplane Co</u> <div style="text-align: center; font-size: small;"> (Name of Drawee) (Signature of Drawer) </div>	
<u>New York, N.Y.</u> By <u>William Johnson</u> <div style="text-align: center; font-size: small;"> (City of Drawee) </div>		

FIG. 39. A TRADE ACCEPTANCE (one form of the draft)

as here drawn it orders the New York-Jacksonville Transit Corporation to pay to the Johnson Airplane Company, in sixty days, the sum of \$60,000. This trade acceptance, or draft, is forwarded to the Transit Corporation, and the Corporation "accepts" it by writing across the face of the instrument the word "Accepted," the date, the name of the bank at which it will be paid, and finally the signature of a responsible official. Not only trade acceptances but drafts in general are "accepted" in this way.

Thus endorsed, the trade acceptance is negotiable, and may be readily discounted. The statement that "the transaction which gives rise to this instrument is the purchase of goods by the acceptor from the drawer" makes the paper acceptable at Federal Reserve banks. The Federal Reserve System is designed to aid only in the financing of legitimate short-term business operations; and the statement that we have quoted is inserted as evidence that the proceeds of this trade acceptance have not been used for a permanent investment, or for one of a purely speculative character.

A draft when accepted by the drawee (the person to whom it is ad-

dressed) becomes virtually a promissory note. If William Johnson, on behalf of the Johnson Airplane Company, discounts the trade acceptance shown in Fig. 39, he must himself endorse it and it thus becomes "double-name paper." This means that the amount advanced to the Johnson Airplane Company on the strength of this instrument will be charged back to the company if the New York-Jacksonville Transit Corporation does not make payment at the stated time.

THE NATURE OF COMMERCIAL BANKING

The Operation of a Commercial Bank. An examination of the statement of a commercial bank will provide background for our discussion of commercial banking in the United States. Table 35 is such a statement for a small-town bank.

TABLE 35. STATEMENT OF A SMALL NATIONAL BANK

<i>Assets</i>		<i>Liabilities</i>	
Loans and discounts (1)....\$	621,190.28	Capital (6).....\$	125,000.00
United States bonds (2)....	1,114,350.63	Surplus (7).....	150,000.00
Other bonds and securities (3)	423,617.72	Undivided profits (8).....	78,182.52
Real estate and fixtures (4)...	101,640.17	Deposits (9).....	2,262,022.53
Cash reserve (5).....	361,406.25		
	<hr/>		<hr/>
	\$2,622,205.05		\$2,622,205.05

We note, first, the bank's *liabilities*. The capital of the bank (Item 6) is the fund subscribed by its stockholders to enable it to start in business. The *surplus* (Item 7) consists of certain earnings that have been assigned permanently to the operation of the business. The *undivided profits* (Item 8) are gains which may later be transferred to surplus, or may on the other hand, be distributed to the stockholders in the form of dividends. Items 6, 7, and 8 constitute a fund which (says the statement) "becomes the property of the stockholders after the debts to the depositors are paid, and is a guarantee fund upon which we solicit new deposits and retain those which have been lodged with us for many years." These three items—capital, surplus, and undivided profits—are amounts *due the owners of the bank*. *Deposits* (Item 9) are amounts *due customers of the bank* who have left funds in the custody of the bank or to whom the bank has made advances against which these customers may write checks.

Since a commercial bank is a profit-seeking enterprise, its officers try to find investments for its funds which will pay a satisfactory return. The *assets* of the bank indicate the nature of these investments. *Loans and discounts* (Item 1) are sums lent to business men and others, usually on the basis of promissory notes or other "commercial paper," but sometimes on real estate or securities. *Government bonds* (Item 2) and *other bonds*

and securities (Item 3) are investments to which commercial banks turn when more profitable business is not obtainable. Item 4, *real estate and fixtures*, covers the building, grounds, and equipment used in operating a bank. The *cash reserve* (Item 5) consists partly of legal reserves held by the Federal Reserve bank of the district in which the commercial bank is located, and partly of cash in the vault of the bank itself. The assets, it will be observed, are items which are *owned by the bank* or *owed to the bank by others*.

Chief Functions of a Commercial Bank. The banking functions which are peculiarly those of the commercial bank are (1) making loans and discounts, and (2) creating deposits for business concerns. In the operation of our economic system, business enterprisers continually find themselves in possession of certain types of purchasing power, or claims upon economic goods. These may take the form of commodities finished but unsold, or commodities sold but not paid for. Eventually, through the process of exchange, these goods will be paid for; but in the meantime the smooth, efficient operation of business demands that further raw materials be purchased, wages be paid, and other regular expenses of business operation be met as they fall due.

In situations such as these, commercial banks may render a great service to business men. By means of short-term loans, these banks substitute purchasing power of wide acceptability (money, or deposits subject to check) for purchasing power of limited acceptability (goods, notes, or drafts) held by the business concerns. A concern presents a promissory note or other acceptable credit instrument at the bank, and is granted a "loan" (which means that the interest charge will be paid when the loan falls due) or a "discount" (in which case the bank deducts the interest charge from the amount of the loan at the time it is made). In either event, the transaction is entered in the books of the bank as both an asset and a liability. It appears among "loans and discounts" as an asset—an item owed to the bank by its customer—and among "deposits" as a liability—an amount owed by the bank to its customer. With this deposit to its credit, the borrowing concern may proceed to write checks against it, though many banks require a borrower to maintain an unused *balance* of 10 to 25 per cent of his loan.

The ability to borrow in this way from commercial banks enables business men to purchase at once the commodities and services they must have, and later they pay off their obligations to the banks. From the point of view of the business men, loans are granted and credit is extended from time to time. From the point of view of society as a whole, a tremendous volume of credit is kept continually in circulation, and through the use of this credit the exchange of goods is facilitated.

To some present-day writers on banking, this description of the function of commercial banking might appear to be out of date and old-

fashioned. It might be held that these short-term, self-liquidating loans based on actual business transactions have been playing a progressively smaller part in the business of commercial banks in recent years; while loans based on real estate, stocks and bonds, and similar investments have become increasingly important. It is true that commercial banks do engage, to a considerable extent, in other types of banking. Some have savings departments, and thus collect funds which are set to work in long-term investments. Many commercial banks are also trust companies and handle, among other things, trust funds which require relatively permanent investment. Moreover, until recent years, some commercial banks have engaged, either directly or through affiliated companies, in investment banking operations connected with the promotion and underwriting of security issues; and prior to August 1, 1935, the national banks of the United States issued money in the form of national bank notes. Nevertheless, the fact remains that the principal function of commercial banks, *as such*, has been and continues to be that of supplying short-term credit to business men. On this subject we shall have more to say when we discuss the vital question of the safety of the deposits held by commercial banks.

The Credit-Currency Structure. We noted in the preceding chapter that about 28½ billion dollars of United States money was actually in circulation on October 31, 1947. This is a substantial sum, but the amazing growth of "deposit currency" (sometimes called "check currency") as a means of paying bills has forced money into a distinctly secondary position. Deposit currency consists of demand deposits created by commercial banks and brought into circulation through the agency of bank checks. Demand deposits in this country totaled more than 84 billion dollars on September 24, 1947.

Demand Deposits (Deposit Currency). It is estimated by experts that this huge amount of deposit currency has a "turnover" of twenty-five to thirty times a year; that is, that this sum is spent some twenty-five or thirty times in the course of a year. For although these deposits are being continually depleted by checks that are written against them, they are also being added to continually from several sources.

One of these, which is of relatively slight importance, is the deposit of money, checks, money orders, and claims upon cash, by means of which individuals and business concerns increase their balances, and against which they draw their checks as occasion arises. Much more important are the deposits that arise through loans and discounts. When a bank lends to a business concern on the basis of commercial paper, such as a promissory note or trade acceptance, it pays the concern the amount due in one of two forms—either in bank notes or in a demand deposit. If notes are taken, the business firm uses them in paying bills and thus distributes bank credit in place of personal credit. If the bank simply

credits the account of the concern with the amount due, there is again an exchange of bank credit for personal credit, since demand deposits are promises of banks to pay money on demand. And the business concern, paying bills with checks drawn against a demand deposit, again distributes the bank's implied promises to pay, in place of its own. It is chiefly through loans and discounts, and not through the deposit of money in a bank, that demand deposits arise. It is important to emphasize this point, since it is one that is often overlooked by students of economics.

Another point that must be stressed is the fact that commercial banks deal mainly in short-term obligations; and this is one reason why the fund of deposit currency is being continually replenished. When a bank creates a demand deposit by granting a loan or discount, it *may* be required to pay out money every time one of this customer's checks comes in for payment, though in many cases the person presenting the check will merely ask the bank to place the amount to his credit so that *his* account may be increased. But in any case, the credit extended on commercial paper is ordinarily limited to a maximum period of ninety days, and at the end of that period the obligation must be paid by the borrower, unless the bank (if so requested) sees fit to renew the loan in whole or part. Since a bank handles thousands of transactions of this kind, its credit resources are in a state of constant flux, being in process of depletion through daily withdrawals, but being replenished all the while by daily deposits.

Bank Reserves. Bankers are sometimes tempted to allow the extension of credit to go beyond the point of safety, for with each new loan a profit is realized. It would be disastrous, however, for a bank to be unable to pay a legitimate claim that is presented against it, since failure of this kind would result in the bank closing its doors. Consequently, it has been the custom in this country to provide, by law, that reserves of a specified percentage must be held against demand and time deposits. In the case of state banks not members of the Federal Reserve System, the amount of the required reserve is regulated by state legislation and differs somewhat from state to state. The amount that for twenty years had to be held in reserve by banks belonging to the Federal Reserve System against demand deposits was 13 per cent for banks in New York and Chicago, 10 per cent for those in cities of medium size, and 7 per cent for small-town banks; the reserve required against time deposits—those which cannot be withdrawn without “notice” of a month being given—was 3 per cent in all cases. The reserves are deposited with the Federal Reserve bank of the district in which the member bank is located. (The Board of Governors of the Federal Reserve System, by authority of the Banking Act of 1935, has several times changed the reserve requirements against demand and time deposits. The latest change, which went into effect on October 3, 1942, made these reserves 20, 20, and 14 per cent for demand deposits, and

6 per cent for time deposits. Since other changes may be made from time to time, we shall use the older, well-established figures in many of our illustrations.)

These reserves may appear at first sight to be absurdly small; but experience has shown that they are entirely adequate, for as long as confidence is maintained there is very little chance of depositors making a concerted demand upon the member banks for payment of the amounts due them. Furthermore, as our study of the Federal Reserve System will show, provision has been made for rendering first aid to any member bank that is threatened by a "run"—that is, by a demand for cash on the part of a large number of depositors.

The Clearing House. Let us suppose that the Johnson Airplane Company has drawn a check for \$50,000 on the Corn Exchange Bank Trust Company in favor of the United States Steel Corporation. If the Steel Corporation happens to have an account in this particular bank, it will in all probability simply endorse the check and deposit it. The bank thereupon debits the Johnson Airplane Company with \$50,000, thus decreasing that company's deposit account, and credits the United States Steel Corporation with the same amount. In this way a payment is effected without any transfer whatsoever of actual money. All that has been done is to make a book transfer.

If the Steel Corporation should be doing its banking business with another institution, say the Chase National Bank, it would still make no direct appeal to the Corn Exchange Bank for payment of the check in cash. In this case, the check would be endorsed and deposited with the Chase National Bank, and this institution (and not the Steel Company) would proceed to make collection. Time was when the procedure followed was to send out daily a "runner," or messenger, from one bank to another, to make collection in cash for credits that had accumulated in the course of the previous day's business. The second bank would likewise send a representative to the first bank, to receive payment of any amount that might be due by reason of credit instruments held against this bank. It is obvious that this duplication of effort meant waste, and as banks increased in number the expenditure of time and effort increased at a still faster pace.

But this method of collection has long since given way to the clearing house. This is a central agency, the main purpose of which is to effect daily settlements between the banks of a given area. If the Chase National Bank has claims against the Corn Exchange Bank, it is likely also that the Corn Exchange Bank has claims against the Chase National. Similar relationships exist between practically all banks of importance in any given city. In order to compare claims and make settlements, representatives of the various banks meet at the clearing house at designated hours every day. Each representative, or "settling clerk," presents the claims of his bank

against other institutions, and receives in turn the claims of the other banks against his own. A balance is struck, either debit or credit, and the amount due is paid by the bank to the clearing house or by the clearing house to the bank, as the case may be.

Reference to Table 36¹ should help to make the procedure clear. Bank A, for example, presents at the clearing house claims upon Banks B, C, D, and E, in the form of checks drawn against deposits in these banks and cashed by Bank A for its customers. The total of these claims is \$12,550. But the other members of the clearing house present claims upon Bank A, as is seen in the first column, to the amount of \$13,050. If one set of claims is balanced against the other, it is evident that Bank A can square its account with the clearing house by paying the amount due, \$500. Banks D and E are obliged to pay, respectively, \$1305 and \$75; while

TABLE 36. HYPOTHETICAL EXAMPLE OF CLEARING HOUSE DEBITS AND CREDITS

Customers of	Deposited Checks Drawn in the Following Amounts on					
	Bank A	Bank B	Bank C	Bank D	Bank E	Total
Bank A.....		\$2,500	\$ 850	\$5,800	\$3,400	\$12,550
Bank B.....	\$ 3,600		1,800	575	1,350	7,325
Bank C.....	2,200	630		750	980	4,560
Bank D.....	4,200	1,200	680		560	6,640
Bank E.....	3,050	1,600	745	820		6,215
Total.....	\$13,050	\$5,930	\$4,075	\$7,945	\$6,290	\$37,290

Bank B collects \$1395, and Bank C \$485, to which they are, respectively, entitled. Since total debits are bound to equal total credits, the clearing house finds itself, at the end of the day, exactly where it started. And yet, through a process of bookkeeping and the payment and collection of small balances, it has managed to adjust the claims existing among all its members. In our illustration given above, credits have been set over against debits, necessitating cash payments of only \$1880 to settle claims totaling \$37,290.

The expenses of the clearing house are borne by the member banks, each paying an amount determined by its average "clearings" in relation to the total. But these expenses are comparatively slight, for the clearing house provides a very economical means of settling claims between banks. Though the volume of clearings in cities like New York and Chicago is enormous, the transactions are carried through with a surprisingly small transfer of actual money. In some cities the balances that must be paid

¹ Adapted from a table arranged by Dr. C. Louis Knight, and published in Paul F. Gemmill and associates, *An Economics Question Book*, New York, Harper & Brothers, 1931, p. 60.

are as small as 5 or 6 per cent of the total clearings. In New York in a recent year, the percentage of balances to clearings was 11.04. In the hypothetical illustration given in Table 36, the balances paid were a trifle more than 5 per cent of total clearings. It should be added that banks may, and often do, pay their balances by drafts on the Federal Reserve banks of their districts. There are in all about 600 clearing houses in the United States.

Out-of-town checks are cleared (or collected) very largely through Federal Reserve banks. If, for illustration, a merchant in Leesburg, Virginia, buys goods from a wholesaler in New York City, paying with his check drawn on the Peoples National Bank of Leesburg, collection would be made in something like the following manner. The wholesaler first takes the check, properly endorsed, to his bank in New York. This bank deposits it for collection in the Federal Reserve Bank of New York. The check is now forwarded to the Federal Reserve Bank of Richmond. The Federal Reserve Bank of Richmond sends it to the Peoples National Bank of Leesburg. The Peoples Bank now settles with the Federal Reserve Bank of Richmond. Upon receipt of this settlement, the Richmond bank immediately credits the Federal Reserve Bank of New York; and the New York bank, in turn, credits the wholesaler's bank. The collection is now complete.

It is estimated that some 95 per cent of all out-of-town (or "country") checks are collected in this way. "For settlements between the Reserve Banks there has been set up that ingenious device, the gold settlement fund, lodged in Washington with the [Board of Governors], and represented by a gold credit on the books of the Treasurer of the United States. This fund is owned by all the Federal Reserve Banks, and settlements between Reserve Banks are daily effected by bookkeeping entries, on telegraphic advice, changing the proportion of the gold fund which the different banks own."² It will be observed that this is an arrangement similar in principle to the ordinary clearing house, but operating on a much larger scale.

THE FEDERAL RESERVE SYSTEM

Our treatment of commercial banking thus far has related chiefly to banks as individual units, but we now turn to a consideration of the centralization of certain commercial banking agencies in the United States, which may be said to date from the introduction of the Federal Reserve System. The Federal Reserve Act was passed in 1913, and the Federal Reserve System began operations in the following year. It substituted a somewhat centralized system of banking for a notoriously de-

² W. Randolph Burgess, *The Reserve Banks and the Money Market*, New York, Harper & Brothers, 1936, rev. ed., pp. 94, 95.

centralized system, and was adopted chiefly for the purpose of providing (1) greater security for depositors, and (2) a larger degree of elasticity of credit. How these objectives were to be attained will be discussed after we have sketched the structure of the Federal Reserve System.³

Federal Reserve Banks. The basis of the system is twelve Federal Reserve banks, located in twelve important cities of the country. Since it was the aim of the Federal Reserve Act to coordinate to some extent all of the commercial banking operations of the United States, the country was divided into twelve "districts," known as Federal Reserve districts, and one Reserve bank was established in each district. Fig. 40 gives an

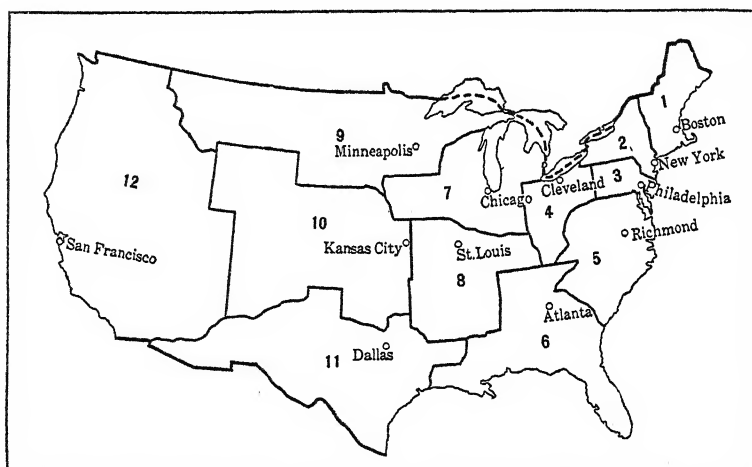


FIG. 40. FEDERAL RESERVE DISTRICTS AND CITIES IN WHICH RESERVE BANKS ARE LOCATED.

idea of the territory assigned to each of the several districts. It will be seen that, in so far as area is concerned, the division is very unequal. However, the basis of division was not territorial equality, but the establishment of Reserve banks at points where they would best serve the banking needs of the country.

In addition to these twelve Federal Reserve banks, there are now in all but two of the districts (the first and the third) "branches" of the Federal Reserve banks, which have been provided for the greater convenience of those banks which are situated at some distance from a main Reserve bank. Thus, in the twelfth district the Federal Reserve bank is

³ Our treatment of the Federal Reserve System is based largely upon W. R. Burgess, *The Reserve Banks and the Money Market*, New York, Harper & Brothers, 1936, rev. ed., which gives a clear account of the organization and early operation of this development in American banking. We have also drawn upon banking experience in more recent years, and have noted changes in the System necessitated by its failure to meet some of the needs of the post-1929 depression.

located at San Francisco, but there are branches of this bank in Los Angeles, Portland, Seattle, Spokane, and Salt Lake City. In practice, then, there are in the twelfth district six centers to which Federal Reserve "member banks" of that district may apply for Federal Reserve service. There are, in all, twenty-five branches of Federal Reserve banks scattered throughout the country.

The Federal Reserve banks are not government banks, nor yet are they ordinary commercial banks. They are often referred to as "bankers' banks," and this term indicates, first, their ownership by the member banks of the districts in which they are located, and, second, the fact that they perform for the member banks much the same type of service as these member banks perform for their customers. But it is important to note—and this is true of central banks in general—that the policies of the Federal Reserve banks are molded in the interests of public welfare, and are not directed primarily toward the goal of private gain. Indeed, their dividends are limited to 6 per cent, though all profits over and above this amount may be set aside as "surplus"; and upon this fund the banks are permitted to draw in order to pay the deficits of unprofitable years.

Member Banks. Every national bank is required by the Federal Reserve Act to take out membership in the Federal Reserve System, and any state bank or trust company that has a capital of \$50,000 or more, and is approved by the Board of Governors, is eligible for membership. In acquiring membership, a bank must subscribe to stock in the Federal Reserve bank of its district to the amount of 6 per cent of its own capital and surplus; however, only one-half of this stock need be paid up, the other half remaining subject to call. The bank must also deposit all of its legal reserves with the Federal Reserve bank of which it is a member. These two items—subscription to stock in, and the deposit of reserves with, the Federal Reserve bank of the district—are the chief obligations of membership.

We have already noted the fact that each Federal Reserve bank is *owned* by the member banks of its district, and this ownership arises, of course, out of the purchase by the member banks of stock in the Reserve bank. The member banks also exercise a degree of control, but by no means complete control, over the Federal Reserve bank. Every Reserve bank is administered by a board of directors. This board is composed of nine members, and is divided into three groups of three members each. Three members are Class A directors, who are bankers elected by the member banks, which, as we have seen, are holders of stock in the Reserve bank. Three members of the board known as Class B directors, and also elected by the member banks, must be men actively engaged in industrial, agricultural, and commercial pursuits in the district. The remaining three directors, who are designated Class C directors, are selected

by the Board of Governors of the System, which will be described presently. It is assumed that Class A directors will represent the interests of the member banks, Class B directors the general economic interests of the district, while Class C directors (sometimes called "government directors") will represent the general public. The directors of each Federal Reserve bank elect a president, with the approval of the Board of Governors, for a five-year period. He is the chief executive officer.

The make-up of the Reserve bank directorship indicates fairly clearly that its function is not that of the usual commercial bank. To be sure, it is intended that a Federal Reserve bank shall aid the banking interests of the district, but the inclusion of Class B members on the board insures that those groups of business men who depend upon the member banks for the extension of credit will have their interests looked after also, while the welfare of the public, in so far as it is dependent upon the operation of a central banking policy, will presumably be safeguarded by the Class C directors. The nature of the ownership and control of Federal Reserve banks appears to justify the statement which has often been made—that they are "semi-private, semi-public institutions."

In 1946, there were 6900 member banks in the Federal Reserve System, with total assets amounting to about \$132,315,000,000. These banks represented only 47 per cent of the commercial banks in the United States at that time, but they handled 85 per cent of the country's demand deposits.⁴ It may be noted that 5007 of these member banks, or almost 73 per cent of the total, were national banks, the remainder being state banks and trust companies that had applied for and gained admission to the Federal Reserve System. Despite the advantages of Federal Reserve membership, particularly in the matter of security, some banks prefer to operate under state charters, which in many instances impose fewer restrictions on a very liberal extension of credit than do the rules of the Federal Reserve System. Thus there is the possibility of making larger profits under state than under federal regulation, but also a distinct sacrifice of safety. This statement is borne out by the fact that, in the financial crash that followed 1929, there were many more bank failures among non-member banks than among those which belonged to the Federal Reserve System.

The Board of Governors of the Federal Reserve System. General supervision and control of the Federal Reserve System are intrusted to the Board of Governors.⁵ This body consists of seven members, and has its headquarters in Washington. Each member of the Board is appointed for a fourteen-year term by the President of the United States, subject to the approval of the Senate. Not more than one of the seven may come

⁴ *Federal Reserve Bulletin*, May, 1947, pp. 562, 602.

⁵ The "Board of Governors of the Federal Reserve System" is the new name, designated by the Banking Act of 1935, for the body which, prior to that date, was known as the "Federal Reserve Board."

from any one Federal Reserve district, and it is stipulated that appointments shall be made with "due regard to fair representation of the financial, agricultural, industrial, and commercial interests, and geographical divisions of the country."

When a bank takes out membership in the Federal Reserve System, it does not thereby lose its independence of action. It ordinarily continues to function much the same as before, conducting its operations in accord with national or state laws. The twelve Reserve banks likewise are largely autonomous units in dealing with their member banks. The amounts they lend to member banks, and the rates at which the loans are made, are ordinarily determined by each Reserve bank for itself through its board of directors. But the Board of Governors acts as a coordinating body in matters that affect more than one Reserve bank, to the end that the activities of one bank shall not interfere with the proper functioning of any of the other banks.

We shall not be able to discuss in detail the many tasks of coordination, regulation, and supervision that come within the jurisdiction of the Board of Governors, but we shall see that the Board exercises a considerable degree of control over the banking operations of the United States. The functions of the Board have been summarized by a former Federal Reserve official in the following statement:

The Board prescribes regulations governing methods and procedure of Federal Reserve operations in those matters where uniformity has appeared to be necessary. Discount rates are fixed by the several Federal Reserve Banks subject to "review and determination of the Board of Governors of the Federal Reserve System," but, under the Banking Act of 1935, "each such bank shall establish such rates every fourteen days, or oftener if deemed necessary by the Board." Open-market policy is determined by an Open Market Committee consisting of seven members of the Board and five representatives of the Reserve Banks elected by the directors by geographical areas. The Board of Governors has power to change the reserve requirements of member banks under certain conditions and within certain limits and power to prescribe margin requirements on certain types of security loans by brokers and banks.

Under the terms of the Banking Act of 1933 the Board exercises special supervision over all foreign operations of the Federal Reserve Banks. The Board passes upon all applications of banks for membership in the Reserve System, after receiving the recommendation of the several Reserve Banks, and exercises a number of specific and general powers in the supervision of member banks. The Board serves as a clearing house for interdistrict settlements, arising from check collections and wire transfers. It has a force of examiners who examine the Reserve Banks periodically, and it maintains a complete statistical record and analysis of Federal Reserve operations, much of which is made public through the Board's weekly press statements, monthly bulletin, and annual report to the Congress. In addition to these and a number of other specific functions, the Board exercises general supervision over the operations of the Reserve Banks.⁶

⁶ W. R. Burgess, *The Reserve Banks and the Money Market*, p. 12.

THE SECURITY OF BANK DEPOSITS

Because the demand deposits of a bank are liable to be drawn upon at any time without advance notice being given, it has been customary to establish legal reserves of specified ratios with which to meet the demands of depositors. State banks operating under the various laws of the several states have been required to maintain against deposits certain minimum reserves specified in the state banking acts. The result has been a decided lack of uniformity as between states. The reserves required of the national banks, prior to the passage of the Federal Reserve Act in 1913, were laid down in the National Bank Act, and applied to all national banks throughout the country, regardless of state boundaries, though the percentages required differed with the classes of cities in which the banks were located.

Bank Reserves Under the National Bank Act. The Federal Reserve Act applies only to banks belonging to the Federal Reserve System, as the National Bank Act of the pre-Reserve era applied only to national banks. Under both of these Acts, the banks of the country were divided into three groups, depending upon whether they were located in very large cities, cities of moderate size, or small cities or towns. These groups were classified as "central reserve city banks," "reserve city banks," and "country banks," respectively.⁷ Central reserve city banks and reserve city banks were required to maintain reserves amounting to 25 per cent of their total deposits, and the percentage for country banks was 15. These reserves took the form of lawful money, and in the case of central reserve city banks the whole of the legal reserve had to be kept *in their vaults* in readiness to meet the demands of depositors. Reserve city banks were required to keep one-half, and country banks two-fifths, of the specified reserves in their own vaults. The remainder they were permitted, if they wished, to deposit with approved banks in other cities. The reserve city banks could deposit one-half of their legal reserves in central reserve city banks, and the country banks three-fifths of their legal reserves in reserve city banks.

Since reserves thus deposited drew interest, while reserves held in their own possession did not, many of the banks cut down to the bare legal minimum the amount of legal reserves actually held in their vaults. Out of this situation arose the practice known as the pyramiding of reserves, which tended to weaken the ability of banks to mobilize their reserves in case of need. Let us suppose, for example, that a Philadelphia national bank had on its books demand deposits amounting to \$4,000,000. Since Philadelphia is a reserve city, the legal reserve against these deposits was

⁷ New York and Chicago are now the only central reserve cities: 62 other cities (mostly large but some of only moderate size) have been designated as reserve cities; and all others are regarded, for Federal Reserve purposes, as "country" areas.

25 per cent, or \$1,000,000. But one-half of this amount could be deposited with a New York (central reserve city) bank, leaving in the vaults of the Philadelphia bank only \$500,000 as a reserve immediately available for the payment of \$4,000,000 of demand deposits which might be called for at any time. Presumably, the Philadelphia bank could also recall at will the \$500,000 deposited with the New York bank. But the New York bank was at liberty to treat this "reserve" as it would treat any other deposit; that is, it could and probably would retain in its vaults merely the 25 per cent reserve required by law, lending out the other 75 per cent, or \$375,000, at interest. If we imagine a series of "bank runs" injected into this situation, it is easy to see that the New York bank might find it difficult, or even impossible, to return the \$500,000 deposit on demand, and the Philadelphia bank in turn, in the absence of this part of its legal reserve of \$1,000,000, might be forced to close its doors because of its inability to pay on demand the claims of its depositors.

It might be suggested, of course, that even the full legal reserve of \$1,000,000 would be a small amount with which to try to meet outstanding deposits totaling \$4,000,000. And, indeed, it was discovered that the National Bank Act reserves of 25, 25, and 15 per cent did not always enable a bank to meet its legal obligations when confronted with a long line of insistent depositors clamoring for the payment of their claims. However, the difficulty lay not so much in the inadequacy of reserves as in the fact that, before the adoption of the Federal Reserve Act, every bank was, in time of emergency, very largely "on its own." Since the function of a commercial bank is to lend out its funds, no such bank can hope to have in its vaults sufficient money to pay off all its depositors if they happen to present their claims at about the same time. When, under the National Bank Act, there developed in a given community a lack of confidence that took the form of runs on the banks, it was pretty much a matter of every bank for itself. One might perhaps expect neighboring banks to come to the aid of a bank in distress, lending it funds with which to pay off its depositors and thus helping to restore confidence throughout the community. This, to be sure, sometimes happened. But it is equally true that a besieged bank often called for help, and called in vain because other banks felt that they must hold fast to whatever reserves they had on hand so that they might meet the demands of their own depositors if the need should develop.

Centralization of Reserves Under the Federal Reserve Act. The Federal Reserve Act undertook to overcome the inadequacy of bank reserves to meet the demands that might be made upon the banks by their depositors. The purpose, of course, was to effect an arrangement which would make it possible for every sound bank to remain open, in contrast to the old system of reserves under which many a bank had been forced to close though its assets were greater than its liabilities. In the matter of

demand deposits, the immediate payment of claims upon demand is imperative, and the fact that a bank has assets on which it could realize within a month or two will not save it from disaster if requests for the payment of demand deposits are not met when made.

The new method of handling reserves involved not an *increase* in the size of reserves, as one might have expected, but instead a *decrease*. Under the National Bank Act, the reserve requirements for demand deposits and time deposits were the same, being 25, 25, and 15 per cent for central reserve city banks, reserve city banks, and country banks, respectively. With the passage of the Reserve Act in 1913, these requirements were changed to 18, 15, and 12 per cent for demand deposits, and in 1917 they were lowered to 13, 10, and 7 per cent, according to the class of the city in which the bank was located. The reserve against time deposits, applying uniformly to all member banks throughout the Federal Reserve System, was set at 5 per cent in 1913, and lowered to 3 per cent in 1917. (As was explained earlier in the chapter, the reserve requirements, since October 3, 1942, have been 20, 20, and 14 per cent on demand deposits, and 6 per cent on time deposits.) All legal reserves must be deposited with and held by the Federal Reserve bank of the district. The member banks do not receive interest on these reserve balances held by the Reserve banks.

This policy of pooling reserves enables the Reserve bank to give aid to any member bank upon which the depositors are drawing heavily. Formerly, the individual bank was expected to fight its own battles and to have on hand at all times a reserve large enough for any emergency. As we have seen, the reserves were often insufficient to meet the needs of the occasion. With the reserves of all member banks under the control of a central agency, the Federal Reserve bank of the district, further funds can readily be extended to the particular bank that needs them. Each district is so large that it is improbable that all banks throughout the area will require aid at the same time. It is scarcely likely, for example, that all of the six hundred and fifty member banks of the third district will need the assistance of the Reserve bank of the district at the same time. But all have deposited with the Reserve bank funds which form a large pool of reserves which are available for the use of any sound bank or banks that may need help. Further safeguards are the authorization to Reserve banks to "make advances to a member bank on its time and demand notes having maturities of not more than four months and which are secured to the satisfaction of the Federal Reserve bank," and the power of the Board of Governors to shift reserves from one Reserve district to another in time of emergency.

The principle involved in the centralization of reserves is similar to the principle of insurance. There is safety in numbers, for as numbers are increased the risk is spread. Since it is impossible to tell in advance which bank is going to be hard pressed, it was necessary under the old system

for every bank to be prepared for the emergency. With the Reserve banks and the Board of Governors standing ready to give assistance whenever and wherever it may be needed, there is no necessity for so large a total reserve as heretofore. The device through which aid is ordinarily given is the rediscounting process, which will be described presently.

The Guaranty of Bank Deposits. For some years after the adoption of the Federal Reserve Act, it seemed that the financial panics that had often accompanied business depressions were a thing of the past. But the post-1929 depression wrought such havoc among the commercial banks of the country that there was no question that the banking system of the United States was still far from perfect.

The causes of this heavy toll of bank failures will be discussed in the following chapter. We wish here merely to note the fact that the loss of the holdings of hundreds of thousands of depositors led to a demand for the federal insurance of deposits. The result was the creation of a plan of federal deposit insurance, the details of which will also be presented in the next chapter.

THE ELASTICITY OF CREDIT

Commercial banks are operated primarily to supply credit to business men. If our enterprisers had the same credit needs from month to month and year to year, and hence required commercial credit in a continuous stream of uniform volume, the problem of providing elasticity of credit would be one of minor importance.

But the economic activities of society vary greatly in volume from time to time, and the demand for credit varies correspondingly. The arrival of payday may cause a great industrial concern to call upon its bank for a hundred thousand dollars in cash with which to meet its payroll. The first day of every month, or the first few days of the month, will ordinarily witness the payment of literally millions of book accounts or other obligations that have been running for some weeks. Bankers in agricultural areas are expected to "carry" their customers during certain parts of the year by lending to them until their crops have been harvested and sold. Large amounts of credit must be available, not throughout the entire year but at certain times, to "move" the corn crop, the wheat crop, and other farm products that run into hundreds of millions of dollars. Manufacturers must be financed so that they may pay for labor, power, and raw materials while engaged in making seasonal goods for, let us say, the Easter trade or the Christmas rush. Finally, there are years of depression when but little credit is used, and years of business boom when credit facilities may be strained to the limit.

It is clear, then, that a supply of credit that is adequate for financing business at certain times may be quite insufficient for other times. Hence,

there is need for an elasticity of credit that will meet the requirements of legitimate business under varying conditions, whether the quantity of credit demanded is large or small.

The Process of Rediscounting. The Federal Reserve Act undertook to provide elasticity of credit through the agency of the rediscounting process. We have noted that Federal Reserve banks are often spoken of as bankers' banks, and that this title arose in large part from the fact that the relationship between a Reserve bank and its member banks is much the same as that which exists between a member bank and its customers. Probably nowhere is this parallel relationship seen more clearly than in the handling of commercial paper; for the *discounting* of commercial paper, which is one of the most important functions performed by a member bank for its customers, is matched by the *rediscounting* of this same commercial paper, which is one of the chief services rendered by a Reserve bank to its member banks.

Business men ask their banks to discount commercial paper for them when they must secure cash or increase their bank deposits in order to meet their obligations. Member banks ask the Reserve banks to rediscount commercial paper (that is, to discount again the paper which the member banks have already discounted for their customers) when they, the member banks, must secure cash with which to meet an emergency, or cash or increased balances with the Reserve banks which will enable them to extend further loans to their customers. However, throughout our discussion of rediscounting, the reader should bear in mind a provision in the Glass-Steagall Act of 1933 which reads as follows: "Discounting at Federal Reserve banks is definitely made a privilege, rather than a right, in that 'shall' is changed to 'may' in the phrase 'shall discount for members.'" From this provision it is clear that a Reserve bank has the power to limit its extension of credit to member banks.

Rediscounting to Increase Legal Reserves. It will be recalled that a member bank must maintain with the Federal Reserve bank of its district a reserve of 13, 10, or 7 per cent (changed to 20, 20, and 14 per cent as of October 3, 1942) against the demand deposits of its customers. In depositing these reserves, the member banks acquire claims against the Reserve banks. Whenever their deposits with the Reserve banks are larger than are needed to fulfill their legal reserve requirements, member banks may withdraw the excess portion of their balances. For example, a "country bank" which owed its customers \$100,000 in the form of demand deposits would have to maintain a reserve of \$7000 (or 7 per cent) with its Reserve bank; but if these demand deposits were reduced to \$50,000, the bank could withdraw \$3500 of its deposit with the Reserve bank and still leave a sufficient balance to fulfill the legal reserve requirements. If, on the other hand, this bank wished to increase the demand deposits of its customers from \$100,000 to \$200,000, it would be required also to increase its reserves

(that is, its balance with the Reserve bank) from \$7000 to \$14,000. It could do this by borrowing from the Reserve banks in much the same manner as business men borrow from member banks.

This process of borrowing by business men, as was emphasized earlier in the chapter, usually takes the form of discounting commercial paper. That is to say, the bank lends credit in the form of a bank deposit, accepting as security for the payment of the loan some sort of acceptable credit instrument. The process of rediscounting consists of a member bank taking this instrument to a Reserve bank and asking the Reserve bank to accept it as security for a loan to the member bank. In this way, commercial paper of approved types is made to do double service, forming the basis, first, of a loan from the member bank to a customer, and, later of another loan from the Federal Reserve bank to the member bank.

The only commercial paper that is regularly eligible for rediscount is short-term credit instruments which relate to actual business transactions. We have here a provision which indicates that the Federal Reserve System is designed to facilitate the extension of commercial credit and not investment credit. Short-term paper is defined as paper which matures within ninety days, but agricultural paper is acceptable if it does not run beyond nine months. Furthermore no paper is eligible for rediscount if it has arisen from transactions in stocks or bonds. Since the rediscounting process requires endorsement by the member bank all rediscounted instruments are "double-name paper."⁸

Not only does eligible commercial paper result from actual business transactions but the need for credit expansion also arises out of such transactions. And so it happens that just at the time when business is brisk, with requests for more and more credit coming in to the banks, there is being created also a large quantity of commercial paper that can be exchanged, so to speak, for the desired credit. For the member banks can have this paper rediscounted at the Federal Reserve banks and thus increase their balances; and on the strength of these enlarged balances, which serve as legal reserves, they are entitled to extend further credit to their customers in the form of bank deposits. In this way an expansion of credit is made possible when it is most needed. But it should be noted that this use of the rediscounting privilege is regarded as distinctly an emergency measure.

As a safeguard against the undue expansion of bank deposits, the Federal Reserve banks, as well as member banks, are required to set up legal reserves against the claims of depositors as represented in demand deposits. Back of every deposit extended to a member bank by a Federal Reserve bank, the Reserve bank must maintain a 100 per cent reserve, of which

⁸It should be noted that emergency banking legislation of the post-1929 depression period conferred temporary eligibility upon several other types of paper, which were to be discounted, however, only "in unusual and exigent circumstances."

at least 25 per cent (reduced from 35 per cent as of June 12, 1945) must be in the form of gold certificates or other lawful money, and the remainder in commercial paper. A further safeguard against excessive expansion is the interest charge made by Federal Reserve banks on all loans that are due from member banks. Since the only way to escape the payment of interest is to pay off the loan, there is every incentive for member banks to redeem their commercial paper pledges as promptly as possible. When business men no longer need large amounts of credit and hence reduce their indebtedness to their banks, these banks in turn are likely to reduce their loans from the Reserve banks in order to effect a saving in interest.

An Illustration of Elasticity of Credit. Since a reserve of only 25 per cent in gold certificates or lawful money is required (in addition to commercial paper) as security against deposit accounts in Federal Reserve banks, a gold dollar in a Reserve bank⁹ may be used as the basis of a \$4.00 credit on deposit. Consequently, a \$1.00 gold certificate in the possession of a Reserve bank will enable that bank to extend to member banks \$4.00 in credit; and member banks as a whole, in turn, will be able to extend a much greater amount of deposit currency to their customers. For the \$4.00 on deposit with the Reserve bank serves as a reserve, and is sufficient security to enable the member bank to give credit to the amount of approximately \$30.77, \$40.00, or \$57.14, depending upon whether the institution is a central reserve city bank, reserve city bank, or country bank. For \$4.00 is 13 per cent, 10 per cent, and 7 per cent, respectively, of the three amounts that we have mentioned. (This calculation is based upon the member bank reserve requirements in effect August 15, 1936, which have since been changed several times, as we have explained. Because the current reserve requirements are 20, 20, and 14 per cent, respectively, for the three classes of banks, the theoretical volume of credit which could today be based upon a \$1.00 gold certificate is \$20.00, \$20.00, and \$28.50.)

The case may be stated in a slightly different way. If a business man wished to borrow \$40.00 from a reserve city member bank, the bank would have to increase its reserve with the Federal Reserve bank to the extent of 10 per cent of this loan, or \$4.00. And the Reserve bank would need only \$1.00 in gold, plus \$3.00 in eligible commercial paper, to enable it legally to credit the member bank's account with this reserve of \$4.00.

Of course, the expansion of credit that actually takes place is not so great as we have imagined in our illustration. Indeed, it has been shown that the necessity for keeping on hand sufficient cash to meet the demands that may be made by depositors makes it impossible to extend anything like so large an amount of credit as we have suggested above would be

⁹ As we have explained, the gold itself is actually held in the Treasury, and Reserve banks hold gold certificates which are virtually "warehouse receipts," but are redeemable in gold only at the discretion of the Secretary of the Treasury.

legally permissible.¹⁰ Generalizations in such matters are risky, and because of their inexactness are often worthless; but our example of the maximum expansibility shows that gold under the Federal Reserve System is much more useful as a reserve than as a direct medium of exchange. However, it is a principle of Federal Reserve policy that reserve funds should be used (either paid out or employed as a basis for credit) whenever they are genuinely needed, but should not be used beyond that need. The determination of what are genuine needs is a major problem.

Rediscounting to Secure Federal Reserve Notes. The ability of member banks to increase their loans to customers depends not only upon enlarging their balances with the Reserve banks and thus gaining the privilege of expanding the volume of demand deposits, but also upon having sufficient "till money," or ready money, with which to cash the checks which customers write against their deposit accounts. Here, again, is a financial problem for which the Federal Reserve System has provided a solution.

Just as the business man looks to his bank to supply money with which to meet his payrolls, so the member bank turns to its Reserve bank when in need of ready cash to hand out over the counter. This need, like the need for larger reserves, may be met through the process of rediscounting. When a member bank presents acceptable commercial paper to the Reserve bank, it may ask either for an addition to its deposit account, in the manner that we have described, or for immediate funds in the form of Federal Reserve notes. If its supply of till money is unduly depleted, it will doubtless choose the notes, which will be readily accepted by its customers when they present checks against their deposits.

Long before the inception of the Federal Reserve System, it was recognized that the inflexibility of bank note issue was a serious handicap. In times of industrial boom, when prices are mounting and business is expanding, there is a demand not only for more credit but for more actual money. Even more vital is the ability to secure funds when the boom has reached its peak, when there are anxiety and uncertainty in the air, and credit has been strained to the utmost. If the banks cannot lend aid in the face of such a crisis, bankruptcy may easily be the fate of business men whose assets are ample but unhappily are not sufficiently liquid to enable them to meet the pressing obligations of the moment.

Why could not the banks, in a situation such as this, have extended further credit to their customers? Because, first of all, bank deposits would already have been stretched just as far as possible in view of the necessity of maintaining legal reserves against deposit accounts; and because, in the second place, the conditions of *national* bank note issue were such that *this* form of credit could not readily be expanded in time of emer-

¹⁰ See, in this connection, C. A. Phillips, *Bank Credit*, New York, The Macmillan Company, 1921, chap. 3.

gency. For the banking laws relating to these issues demanded that national bank notes be secured by a 100 per cent deposit of government bonds, plus a redemption fund of 5 per cent in lawful money. Therefore, a shortage of government bonds might have proved to be a very real stumbling block at a time when more bank notes were needed. For the government bonds that could be used as backing for note issues were limited in number, and most of them, as a rule, were already serving as security for issues of bank notes.

The Federal Reserve solution of this problem was to substitute commercial paper for government bonds as security against notes issued to meet the demands of business expansion. We are referring, of course, to the issuance of Federal Reserve notes through the process of rediscounting. When the member bank presents eligible commercial paper for rediscount and asks for Federal Reserve notes, the Reserve bank must deliver as security to the Federal Reserve Agent (who is the official representative, in the Federal Reserve bank, of the Board of Governors) gold certificates to the amount of 25 per cent (reduced from 40 per cent, as of June 12, 1945) of the issue, with the remainder in the form of acceptable commercial paper. In addition to this collateral fund of 100 per cent, Federal Reserve notes are backed by the assets of the issuing bank, and their payment is guaranteed by the United States government. Consequently, elasticity of bank notes has been attained through the rediscounting process without any reduction in safety.

There is a tendency for Federal Reserve notes to move back to the bank of issue once the need for them has passed. When currency is again abundant and the member bank has more bank notes available than are necessary to meet the needs of its customers, it ordinarily returns as promptly as possible the Federal Reserve notes that it has borrowed, thus putting a stop to the interest charge. Member banks, being profit-seeking organizations, aim to keep in their immediate possession only such money as will be needed to satisfy the requirements of those with whom they transact business. Any surplus that they may have is sent to the Reserve bank, where it can be used to cancel loans or to serve as a legal reserve.

The rediscounting process is "a very present help in trouble," such as a bank faces when its depositors start a run upon its resources. If the bank's total volume of deposits is large, so that it will need a great deal of money with which to pay the depositors, it should also have in its vaults a large quantity of commercial paper. If it has pursued a sound commercial banking policy, lending on short-term commercial paper arising out of actual business transactions, it will have an abundance of such paper and will experience no difficulty in rediscounting this paper, and obtaining Federal Reserve notes with which to pacify its depositors. Probably there is no better way to stop a bank run than to pay the claims of depositors not only readily, but even eagerly! More than one depositor has been paid off in

full, only to fall in again at the end of the line and redeposit his entire receipts, once he has satisfied himself that his money could be had if he really wanted it. And more than one bank run has been stopped by the appearance on the scene of a Federal Reserve truck carrying bales of Federal Reserve notes. The rediscounting feature of the Reserve System has aided materially in lessening the terrors of a financial panic.

1. What is "credit money"?
2. Explain the distinction between *investment* credit and *commercial* credit.
3. What two types of capital result from the creation of these two forms of credit? Explain.
4. "When *properly endorsed*, a note becomes '*negotiable*.'" Explain the italicized terms.
5. What is the process of "discounting"?
6. There are several forms of the "draft," but all are based on the same general principle. What is this principle?
7. What is "double-name paper"?
8. What are the chief functions of the commercial bank?
9. Explain the relationship between "loans and discounts" and "deposits."
10. What is deposit currency? Give a synonym for this term.
11. What is the quantitative relationship between *money in circulation* and *deposit currency* in the United States?
12. What is a demand deposit?
13. Describe ways in which a demand deposit may be created.
14. What are the regulations governing the issuance of deposit currency? Why are such regulations necessary?
15. Of what significance is the statement that "commercial banks deal mainly with *short-term* obligations"?
16. Describe the workings and state the purpose of the clearing house.
17. The transactions of the clearing house "are carried through with a surprisingly small transfer of actual money." Illustrate.
18. Explain the way in which the Federal Reserve banks facilitate the clearing of checks. What is meant by the word "clearing" as here employed?
19. What is the "gold settlement fund," and how is it used?
20. What two specific objectives led to the inauguration of the Federal Reserve System?
21. What is a Federal Reserve bank, and where are the Reserve banks located?
22. What is the significance of the statement that Federal Reserve banks are "bankers' banks"?
23. What is a member bank, and how does a bank secure membership in the Federal Reserve System?
24. By whom are the Reserve banks owned, and by whom controlled?
25. Explain the suggestion that Federal Reserve banks are "semi-private, semi-public institutions."
26. To what extent are the commercial banking agencies of the country allied with the Federal Reserve System? Be specific.

27. Describe the organization of the Board of Governors of the Federal Reserve System, and enumerate and explain its powers.
28. What changes were made in the handling of bank reserves through the provisions of the Federal Reserve Act? What are the present reserve requirements for demand deposits and time deposits?
29. What was the purpose of changing the legal reserve requirements?
30. Why is there need for elasticity of credit in the banking system of the United States?
31. State concisely the nature of the process of rediscounting.
32. Describe the rediscounting process when used for increasing legal reserves.
33. What are Federal Reserve notes?
34. What function are these notes supposed to perform?
35. How does the plan of issuance of these notes facilitate the performance of this function?
36. Describe in detail the method of providing a larger degree of elasticity of credit by expanding and contracting the issue of Federal Reserve notes.
37. In what respects, if at all, is the issuance of Federal Reserve notes superior to that of national bank notes in meeting the needs of a complicated industrial society?
38. How may the issuance of Federal Reserve notes be used advantageously in stopping a bank "run"?

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Significant Issues in Commercial Banking

IN THE LAST CHAPTER WE DESCRIBED THE FUNCTIONS OF COMMERCIAL BANKING in our modern economy, and outlined the system which undertakes to perform these functions for the people of the United States. In the course of our examination, we saw that in several respects the system has failed to meet fully the banking needs of the country. We shall now inquire more closely into some of the problems of commercial banking as they appear today.

THE PROBLEM OF ELASTICITY

The Nature of Elasticity. One essential characteristic of a sound commercial banking system is elasticity of currency and commercial credit. Perfect elasticity is unattainable unless the following three conditions are met: First, the *amount* of currency and commercial credit in use must be able to expand and contract. Second, the expansion and contraction of currency and commercial credit must be coordinated, *in point of time*, with the changing needs of business and economic activity in general. Finally, the *extent* of expansion and contraction must also be coordinated with these changing needs.

Under these conditions, money and commercial credit will be able to perform their legitimate function of facilitating the operation of economic activity. They will not be issued in ways and amounts that will raise general prices, stimulate business activity, increase profits, reduce real wages and labor's purchasing power, lead to overinvestment in plant and equipment, and otherwise bring about conditions which will later lead inevitably to business depression; nor will they be decreased so sharply as to precipitate business crisis, liquidation, and depression. Money and commercial credit are legitimate devices for avoiding the inconveniences of barter, and for facilitating business operations. But this issuance should not be allowed to affect the volume of these operations, or to cause instability in economic activities.

The Control of Money and Credit. Money and commercial credit

have not been perfectly elastic under the Federal Reserve System, for only two of the essential conditions of elasticity have been met. In violation of the third condition, the extent of expansion and contraction has not been closely coordinated with the changing needs of business. The movements of the general price level and the violent fluctuations in the volume of economic activity which have occurred since 1913 indicate a tendency for the total volume of money and credit to become overexpanded in some periods and overcontracted in others. Despite the powers vested in the System for credit control, the issuance and withdrawal of money and credit have sometimes been allowed to stimulate business artificially, and at other times have made for depression. In other words, money and credit have not been confined to their legitimate neutral rôle of facilitating exchange. These unhappy results are attributable in part to a lack of sufficient authority, and in part to conditions which are inherent in the administration of any system of credit control.

The Control of Rediscount Rates. One of the powers originally granted the Federal Reserve System for controlling money and credit was authority to raise and lower the rediscount rate. When an undue expansion of credit seems imminent, the Reserve banks can raise their rediscount rates, with the approval of the Federal Reserve Board (now the Board of Governors of the Federal Reserve System). Such increases mean, in effect, an increase in the prices which member banks have to pay for additional money or credit—that is, for loans extended to the member banks on the basis of eligible commercial paper endorsed by them and pledged with the Federal Reserve banks. The results which are expected to follow changes in rediscount rates are quite clear in theory. Increases in rates make it more expensive than formerly for member banks to obtain credit from Reserve banks. It should follow that the member banks will charge their customers higher rates for additional commercial credit and that the customers will consequently limit their new loans, and extensions of old loans, to amounts which are absolutely essential. When this occurs, the expansion of credit will be checked. Similarly, lowering the rediscount rates when business is slack is supposed to make it easier for member banks and their customers to borrow, and thus encourages them to increase their loans.

The Effectiveness of Changes in Rediscount Rates. In actual practice, however, raising and lowering the rediscount rates has not been an effective device for controlling the expansion and contraction of money and commercial credit. In the first place, a considerable expansion of credit sometimes gets under way without recourse to rediscounting by member banks, because they have large reserves idle at the beginning of a period of active business. In the second place, when a bank rediscounts in order to increase its reserves with a Federal Reserve bank, it acquires a greater lending power than appears on the surface. If a bank

adds \$1000 to its reserve by rediscounting, it is enabled to lend more than that sum to business men in the form of demand deposits, even if other member banks are not doing the same thing. This is possible because loans in the form of demand deposits are not always entirely checked out by the borrowers, and when checks are drawn against such deposits, they are often redeposited in the same bank. Thus, a bank, by obtaining \$1000 through rediscounting at 5 per cent, is enabled to lend a somewhat larger amount to business men at 6 per cent. And even if the rediscount rate is raised, the bank may continue to lend extensively and profitably to its customers without charging them more than the former rate of interest, namely, 6 per cent.

Of course, when a member bank obtains an additional reserve of \$1000 in this way, it has the *legal* right to increase the demand deposits of its customers by lending (by any amount up to \$10,000, on the average) on the basis of the small legal reserve normally required against demand deposits. This right, however, cannot be exercised by one bank alone. If a single bank expanded its deposits in this way, the enlarged deposits would cause a very large number of checks to be drawn against the bank by its depositors. The clearing-house claims against this bank would then be much larger than the bank's claims against the other banks in the clearing house. These daily net adverse balances would eventually drain away much of the bank's working cash, and force it to reduce its deposits. However, when all or most member banks are rediscounting and expanding credit, a given bank may reach something approaching the maximum legal average expansibility of ten times the amount of reserve added by rediscounting; for under these circumstances the checks drawn by its customers against demand deposits are largely offset by the checks it receives which are drawn on other member banks. If this is the situation, even a 5 per cent rise in the rediscount rate would mean a rise of only one-half of one per cent, or a little more, in the interest rate charged to business men. In practice, the member banks might not raise their interest rates at all.

Even if this policy of Federal Reserve control succeeded in raising the rates which member banks charged business men, the rise might not check borrowing greatly. When a business man expects to make a profit of 10 or 20 per cent by using borrowed funds, he is unlikely to be restrained by the necessity of having to pay, say, an additional one per cent for these funds. Finally, it is entirely possible that our domestic policy of control might be upset by concerns in foreign countries, should they decide to take advantage of the high interest rate by making us extensive loans. And even domestic corporations with idle funds might throw them into the market if the interest rate obtainable were very high.

Ineffective as changes in rediscount rates have been in preventing the overexpansion of credit, they have been even less successful in checking

its contraction. In periods of poor business, there is ordinarily little or no rediscounting, so that a lowering of rediscount rates means little. At such times, member banks are likely to lower their interest rates to business men in any case. The truth is that, in a period of declining business, enterprisers do not want to borrow from member banks for normal commercial credit purposes, and the banks are not anxious to lend. When a business man thinks he cannot make profits by using borrowed funds, he is unlikely to borrow even if the interest rate is only one per cent.

Open-Market Operations. The other major power originally given to the Federal Reserve System for controlling commercial credit is open-market operations. This device functions through the rediscount rate, though indirectly. When there is danger of commercial credit being overexpanded, the Federal Reserve banks may decide to sell, say, a billion dollars' worth of government bonds in the open market. These securities will be bought by business men, corporations, banks, and other financial institutions. Let us suppose, for the sake of simplicity, that they are all bought by business men who pay the Federal Reserve banks with checks against demand deposits in member banks. These checks will be charged by the Federal Reserve banks against the reserve accounts of the member banks. This will lower the legal reserves of the member banks by a billion dollars, and the demand deposits which they may legally carry for business men by roughly ten times this amount. Hence, the member banks will have to curtail credit or replenish their reserves by rediscounting at the Reserve banks. If they do the latter, they will find that they must pay higher rediscount rates than before. In this way, the open-market operations are intended to make the changes in rediscount rates effective. However, since open-market operations must work through changes in rediscount rates, they cannot be more effective in checking credit expansion than a change in the rediscount rate itself would be.

When business is slack, the purchase of securities in the open market by the Federal Reserve banks is expected to increase the reserves and idle funds of the member banks, and thus stimulate lending by these banks. Here, again, the open-market operation is not likely to be effective. If idle funds are thrust upon member banks through open-market operations, the banks will probably use them to reduce their debts and increase their liquidity, or to purchase government bonds, rather than to make new loans to business men.

Other Factors in Credit Control. Changes in rediscount rates and open-market operations were, until recent years, the only means by which the Federal Reserve System could control the expansion and contraction of commercial credit, unless one includes the doubtful measures of persuasion and exhortation. However, even if the powers of control were adequate, there would remain the difficult matter of deciding just when to use them. To determine precisely when the further issuance of money

and credit would be unsafe, the officials in charge would have to possess almost superhuman knowledge and ability. And yet the controls must be applied at exactly the right time if they are to be effective and not restrain desirable business activity. Even if it were possible to determine exactly when control should be exercised, it would take great courage to adopt the necessary measures at that time, in the face of the economic, political, and international pressure which might be exerted by those who would be adversely affected.

Additions to Control Powers. In the Banking Acts of 1933 and 1935, changes were made in the organization of the Federal Reserve System and in its credit control powers. The Board of Governors of the Federal Reserve System (formerly called the Federal Reserve Board) now consists of seven members, who are appointed by the President of the United States with the approval of the Senate. In the Act of 1935, it was specified that Board members should serve terms of fourteen years each at a salary of \$15,000 per annum, that their terms should expire in rotation, and that members could not be reappointed. These changes were intended to increase the independence and detachment of the Board, and to enable it to exercise its powers, when necessary, without fear of outside influence.

Increased powers were also granted the Board of Governors of the System. This Board now constitutes a majority of the membership of the Federal Open-Market Committee, and can control its decisions. Formerly this Committee of twelve was elected to represent the twelve Federal Reserve banks. Today, only five of the twelve represent these banks. Moreover, the decisions of the Committee to engage or not engage in open-market operations are now binding on the Reserve banks. These banks must submit their proposed rediscount rates to the Board of Governors at least once in every two-week period, and the rates must be approved by the Board before they become effective. This gives the Board of Governors control, for all practical purposes, over the rediscount rates charged by the Federal Reserve banks.

In addition to being given direct authority over rediscount rates and open-market operations, the Board has received other new powers for controlling commercial credit. First, it may now increase the reserve requirements that member banks must hold against demand and time deposits, by any amount up to double the long-established requirements of 13, 10, and 7 per cent (3 per cent for time deposits) for the three classes of member banks. (The Board actually raised and lowered these reserve requirements several times between 1935 and 1942. Since October, 1942, the requirements have remained at 20, 20, and 14 per cent for demand deposits and 6 per cent for time deposits.) Doubling the reserve requirements has the effect of reducing by one-half the ability of member banks to extend demand deposits to business men on the basis of a given amount of reserves.

The Board of Governors may fix, for each Federal Reserve district, the percentage of a member bank's capital and surplus which may be extended to borrowers in the form of loans secured by stock and bond collateral. This percentage may be changed upon ten days' notice. After investigation and hearing, the Board may deny the credit facilities of the System to any member bank which appears to be lending too extensively for speculation in securities, real estate, or commodities. This power permits the Board to refuse rediscounting facilities for speculative purposes, while allowing credit to be expanded for normal business operations. Through its control over "margin" requirements, the Board also determines the percentage of the market values of securities that member banks may lend. Finally, the Board may suspend or remove any officer or director of a Federal Reserve bank, or of member banks, for continued violations of law, or unsafe and unsound banking practices.

These changes have greatly strengthened the control of the Federal Reserve System over the expansion of commercial credit. If the Board of Governors should decide to raise rediscount rates and to engage in open-market operations, and at the same time should raise to the limit the legal reserves for demand deposits of member banks, adjust margin requirements and the use of bank credit for speculative purposes, and cut off rediscounting facilities for erring member banks, it should be able to halt a movement toward the overexpansion of credit *in any ordinary situation*. It remains true, however, that credit control must be exercised wisely and courageously if desirable ends are to be reached.

Up to the present time the Board's new powers for controlling the expansion of bank credit have not received a fair trial. These powers were granted only a few years before the United States became involved in World War II and an emergency situation arose in which it became impossible to control the expansion of bank deposits and money in circulation. Participation in the war brought about an increase in federal expenditures from \$12,774,000,000 in 1941 to \$93,744,000,000 in 1944 and \$100,405,000,000 in 1945.¹ This increase was financed in part by sharp rises in taxation and by the sale of government bonds to individuals and business firms. These methods of government finance are considered non-inflationary, since they reduce purchasing power in the hands of individuals and firms and increase it in the hands of the government. However, another large part of the increase in governmental expenditures was financed through the sale of government bonds to the banks, and this method of finance is definitely inflationary because, in this process, individuals and firms do not give up funds as the government acquires them.

The point is that when banks purchase government bonds, they pay for them by setting up demand deposits for the federal government. When

¹ *Federal Reserve Bulletin*, October, 1945, p. 1047.

the government spends these deposits, the funds find their way directly or indirectly into the hands of individuals and firms and are redeposited in the banks, where they become private rather than governmental deposits and can be used by their owners for any productive or consumptive purpose. In such a situation there is little the Board of Governors of the Federal Reserve System can do to limit the growth of bank deposits. Thus, the total deposits of all *member* banks increased from \$61,717,000,000 on December 31, 1941, to \$118,378,000,000 on June 30, 1945.² For *all* banks in the United States, demand deposits increased from \$44,316,000,000 to \$96,730,000,000, and time deposits from \$26,476,000,000 to \$41,710,000,000, over the same period, while money in circulation in the United States increased from \$11,160,000,000 to \$27,108,000,000.³ Under the circumstances, the government's desire to prevent a wild inflation of prices had to find expression in direct price control, as we shall see in Chapter 36.

Ever since the end of World War II, the Board of Governors has apparently been committed to a policy of low interest rates, in coordination with the similar policy of the federal government itself, and open-market operations have been confined to repeated purchasing of government bonds in supporting the market for these securities. Rigid adherence to these policies will preclude the use of open-market operations and manipulation of interest rates as devices for controlling the expansion and contraction of credit.

THE PROBLEM OF SAFETY

In the last chapter we saw that national banks were unable to provide adequate safety for depositors under the National Bank Act. The reserve requirements behind deposits were large, but each bank had to depend upon its own resources in time of trouble. There was no central agency to supply additional funds when depositors became impatient, and no process of rediscounting through which funds could be obtained. Moreover, a bank would often have trouble in bringing its own reserves into play, because part of these reserves was commonly deposited at interest with other banks and might not be available in time of need.

Safety Under the Federal Reserve System. One of the purposes of the Federal Reserve Act, as originally passed, was to alter these conditions so as to provide safety for the depositors of member banks. Though the actual percentages of reserves required against deposits were reduced rather than increased, every member bank was compelled to keep its reserves in the Federal Reserve bank of its district, without interest. Then, in case of emergency, the Reserve bank could place at the disposal of a

² *Ibid.*, p. 1032.

³ *Ibid.*, pp. 1029, 1032.

distressed bank not only the member bank's own reserve, in the form of cash, but additional funds from the great pool of reserves which it held for the other member banks of the district. For the Federal Reserve Act provided that a member bank should be permitted to obtain additional funds, when necessary, by rediscounting eligible commercial paper at the Federal Reserve bank. It was thought that this provision would make it unnecessary for a member bank to close its doors because of inability to obtain funds. To make assurance doubly sure, it was arranged that funds could be shifted from one district to another, in case there were runs on many member banks in a single district at a given time.

Bank Failures in Recent Years. Many people, firmly convinced that banks could not fail under the Federal Reserve System, were greatly shocked and highly indignant at the large number of bank failures that took place even in good business years, and the almost total collapse of the banking system and unprecedented toll of failures that marked the depression years of 1929-1933. In the prosperous period from 1921 to 1929, inclusive, 995 member banks failed, while 4719 non-member banks met a similar fate. During the four depression years, 1930-33, when member and non-member banks were given a severe test, 2110 member banks and 6796 non-member banks failed.⁴ Let us examine these depression figures more closely. In 1929 there were roughly twice as many non-member as member banks. If member and non-member banks had been equally safe (or equally unsafe), we should have expected the ratio of failures between non-member and member banks to be two to one. Actually the ratio was greater than three to one. This comparison indicates that member banks provided a substantially higher degree of safety for depositors than non-member banks in these depression years.

In 1933, a bank holiday was declared, and all banks in the country were closed. After a few days, the banks which seemed to be sound were licensed to reopen, while the others were required to put themselves in satisfactory condition or eventually be liquidated. Since the beginning of 1934, there have been relatively few bank failures. From 1934 to 1946, inclusive, only 28 member banks and 307 non-member banks were closed on account of financial difficulties.⁵

The failure of non-member banks should not, of course, be charged against the Federal Reserve System. Non-member banks make loans on types of securities, for lengths of time, and for amounts that would not be permitted under the Reserve System, and they persist in following banking practices which would not be tolerated in a member bank. Their reserves are not kept in accordance with the provisions of the Federal Reserve Act, but need comply only with those of state banking laws. In many cases their capitalization is smaller than the minimum required of

⁴ *Statistical Abstract of the United States, 1939*, p. 263.

⁵ *Federal Reserve Bulletin*, September, 1946, p. 1033.

a member bank, and the supervision to which they are subjected is often in no way comparable to that prescribed for member banks. The Federal Reserve System has no control over non-member banks, and has no authority to extend aid to them when they are in distress.

The Causes of Member Bank Failures. In spite of the relatively favorable safety record of member banks in the depression years following 1929, many people feel that altogether too many member banks failed during this period. For 2110 bank failures form a heavy casualty list for a system which aims to provide safety for depositors; and the failure of these member banks tied up deposits running into billions of dollars.

TABLE 37. LOANS AND INVESTMENTS OF ALL MEMBER BANKS,
1921-1929^a

(All figures in millions)

Year (June 30)	Investments	Loans on Securities	Loans on Real Estate	All Other Loans	Total Loans and Investments
1921.....	\$ 6,002	\$ 4,400	\$ 875	\$12,844	\$24,121
1922.....	7,017	4,500	1,100	11,565	24,182
1923.....	7,757	4,950	1,350	12,450	26,507
1924.....	7,963	5,350	1,575	12,279	27,167
1925.....	8,863	6,718	1,875	12,062	29,518
1926.....	9,123	7,321	2,161	12,579	31,184
1927.....	9,818	8,156	2,449	12,333	32,756
1928.....	10,758	9,068	2,624	12,611	35,061
1929.....	10,052	10,095	2,750	12,814	35,711
Percentage increase, 1921-1929.....	67	129	214	0	48

^a Source: *Hearings, S. Res. 71, 71st Congress, 3rd Session*, p. 138, as reported by Lawrence W. Towle in his article, "Time Deposits and Price Stability," in *American Economic Review* for December, 1935, pp. 653-660.

We may well ask how it happened that so many member banks failed. The answer is that the causes were many and various, running all the way from the use of funds to construct a modern replica of a Greek temple as the bank's place of business, to the "borrowing" of large sums by bank officials (sometimes without even the formality of giving a promissory note) and the loss of these funds in playing the stock market. However, the causes of many member bank failures were to be found in changes which took place in the nature of the loans and investments handled by these banks between 1921 and 1929. The figures in Table 37 will help to make these changes clear.

As may be seen from this table, one type of loan seems to have been slighted during this period of rapidly expanding loans and investments. "All other loans," which include all ordinary commercial loans to busi-

ness men based upon short-term, self-liquidating paper arising out of the exchange of commodities, remained virtually constant during the period. It may be that the speeding-up of delivery services made it possible for some business men to reduce their inventory requirements and adopt the policy of so-called hand-to-mouth buying; and perhaps other firms were reluctant to become heavily indebted to commercial banks while the bitter experiences of the 1921-22 depression were still fresh in their minds. Then, too, as the period wore on, it is possible that their own large profits provided many business men with an adequate supply of funds and that "favorable" stock market conditions induced some corporations to obtain, by the sale of additional shares of stock, funds which would ordinarily have been borrowed from the banks. Whatever the specific causes may have been, it is an undeniable fact that, despite a 48 per cent increase in total loans and investments, the member banks were performing their principal function of providing short-term *business* credit no more briskly at the end of the period than at the beginning.

But during this period large additions were made to the gold stocks of the country, bank reserves were plentiful, and the Federal Reserve System, for various reasons, quite consistently followed an "easy money" policy. Since banking is not a profitable business unless bank funds are kept at work, the member banks, in the absence of appeals for ordinary commercial loans, decided to lend in other fields. The identity of these fields may be readily established by reference to Table 37. From 1921 to 1929, member banks increased their loans on real estate by 214 per cent, their loans on stocks and bonds by 129 per cent, and their direct security purchases and other investments by 67 per cent. As a result of these changes, many member banks found themselves by 1929 in a position which raised doubts of their soundness as commercial banks.

The Question of Frozen Assets. We are not suggesting that loans should not be made on real estate and securities, or that banks should not invest in securities. Such loans are necessary and desirable, but we question that commercial banks are the best institutions to handle these kinds of business. When, during a boom period in business, commercial banks get the greater part of their assets tied up in real estate and securities, despite the fact that their depositors have the right to demand their deposits in cash either immediately or on a few days' notice, they are likely to find themselves in trouble if prosperity gives way to depression. For example, the depression years of 1929 to 1933 were marked by falling prices of securities and real estate, and many member banks were unable to recover the funds which they had lent or invested.

Of course, the member banks' "call loans" to brokers, secured by stocks and bonds, were safe for the most part; and loans to other customers, advanced to buy securities, probably led to few losses when these loans were made on adequate "margin." For if the customers failed to pay their

indebtedness, the banks could usually sell the securities for enough to cover the loans. However, some losses were doubtless taken on loans of this type, when bankers had imprudently lent too high a percentage of the inflated values of securities—for the slump in security prices was sudden and drastic. In many cases, the loans on real estate, which had seemed very conservative on the basis of the inflated valuation of the properties, were found to be uncollectible, for the depression prices of many parcels of real estate were less than the amounts that had been lent on them. Similarly, the banks' directly owned securities and other investments declined rapidly in value, and the efforts of distressed banks to liquidate these investments speeded the decline. Consequently, when depositors began to demand their deposits, member banks found themselves in serious difficulties.

But were not the Reserve banks expected, in such troublous times, to come to the rescue of their members? It was, indeed, a time when aid was needed, but the member banks were often not in a position to claim and receive aid. For membership in the Federal Reserve System was never an absolute guaranty of safety for a bank. The statement that the System would not allow member banks to fail meant merely that the Reserve banks would place funds, in practically unlimited amounts, at the disposal of member banks which had not impaired their borrowing power through dishonest or imprudent banking practices, and which had on hand a supply of collateral eligible for rediscounting. The Reserve banks could advance funds to members (1) by rediscounting eligible commercial paper, and (2) by discounting promissory notes of the member banks themselves, when secured by government bonds.

However, eligible commercial paper and government bonds are likely to be scarce in the case of banks that have lent extensively on other types of collateral. The Reserve banks could not legally rediscount paper based on stocks and bonds, or real estate mortgages; nor could they lend on the member banks' direct investments, unless these took the form of government bonds. So far as we know, no member bank failed during the depression because the Reserve banks were short of funds, but many failed because their assets were such that the Reserve banks could not legally aid them. And it developed that some member banks were signing their own death warrants when they overexpanded certain types of loans and investments from 1921 to 1929, though at the time they seemed merely to be sharing in what many people regarded as a new and permanent era of prosperity.

The Attitude of the Public. It would be both unfair and misleading to say that every member bank that failed richly deserved to do so. The banks that took improperly secured mortgages, and unseasoned, high-yield, narrow-market bonds, or that made loans on securities which were inadequately margined, inadequately diversified, or which otherwise failed

to measure up to sound banking standards, were responsible for their own fate.⁶ Moreover, the conditions were even less satisfactory in non-member banks. However, some banks failed, or were at least seriously embarrassed, because of hysteria on the part of the banking public, and not because they were unsafe. Some banks that had been reasonably prudent were forced to close their doors because unreasoning fear on the part of their depositors led them to demand immediate cash for their deposits. And in some cases these demands could not be met because the banks had, in all good faith, accepted commercial paper which proved later to be worthless, since the firms that issued it had been forced into bankruptcy by the depression. It would seem, then, that a banking system is not much stronger than its weakest bank. Had not the failure of certain large banks disclosed the existence of unsound conditions in the banking world, the depositors of other banks might not have questioned the safety of their deposits, and thus runs on essentially sound banks might have been avoided.

Recent Legislative Changes Affecting Safety: Separation of Commercial and Investment Banking. In view of the general criticism of our commercial banking system in recent years, it was inevitable that legislative steps should be taken to remedy the situation. Let us examine this legislation, considering first the measures taken to separate investment and commercial banking.

The Banking Act of 1933 provided that member banks must give up their security affiliates within one year. These affiliates were companies organized and controlled by commercial banks for the purpose of engaging in investment banking operations. These operations, which had proved very profitable prior to 1929, could not legally be performed directly by member banks. Though the relations of commercial banks with their security affiliates were often entirely wholesome and aboveboard, there were cases in which the reverse was true. The affiliates sometimes unloaded doubtful securities on the commercial banks—securities which the banks would not have purchased from anyone else—and the banks sometimes made loans to their affiliates in amounts and on securities which would not have been considered by the directors of independent banks. Hence, the separation of the two types of banking was probably necessary, if we are to have a sound commercial banking system. It was also provided that investment banks shall not be allowed to hold demand deposits, and that no officer or director of a member bank shall be an officer or director of an investment banking firm.

We must also emphasize at this point the fact that the Board of Governors of the System has authority to regulate the percentage of member

⁶ So said Winthrop W. Aldrich, noted New York banker, in suggesting ways of improving the banking system, before the Sub-Committee of the United States Senate Committee on Banking and Currency at Washington, November 29, 1933.

banks' capital and surplus which may be tied up in security loans, and may deny rediscounting facilities to member banks which misbehave in this respect. Formerly, the Reserve banks were required to rediscount for member banks whenever eligible paper was presented, and the member banks could use the funds for speculative or other purposes. Member banks are now prohibited from making call loans "for others"—the others being individuals, corporations, or foreign groups who wish their funds to be used temporarily for speculative purposes with the privilege of withdrawing them at any time. Member banks may not underwrite securities except those of states and municipalities, may deal in securities only as agents of their customers, and may not have more than 10 per cent of their own capital and surplus invested in the securities of any one obligor.

Loans to Officers. One of the evils of our banking system in the past was borrowing by executive officers from their own banks on collateral of doubtful value. The Act of 1933 provided that officers of member banks may not borrow from their own banks and must report any personal loans from other banks. However, according to the Act of 1935, banks may lend to officers of member banks in amounts up to \$2500, provided the loans have received the prior approval of a majority of the directors of the lending banks.

These regulations are probably desirable and, if they have the effect of keeping member banks within their legitimate field of commercial banking, may add to the safety of their depositors. However, it must be remembered that the effect of such legislation, with respect to both elasticity and safety, may be offset in part by the non-member banks, which are not controlled by federal legislation. Moreover, there may be other ways to render the regulations ineffective. For example, prior to 1933, a business man who wished to play the stock market might leave his own funds in his business as capital and speculate with borrowed funds. Now, however, he might speculate with his own funds and borrow from a commercial bank to finance the short-time needs of his business. In such cases, the bank's safety may be increased, but speculation is not controlled.

Changes in Member Bank Borrowing. The Banking Acts of 1933 and 1935 also changed the terms on which member banks may borrow from Reserve banks, and provided a system of federal deposit insurance for bank depositors. During the depression, depositors were sometimes unable to get cash on demand, because of the inability of the banks to turn their assets into cash promptly. The obvious remedy was to make all kinds of commercial paper eligible for rediscount at the Federal Reserve banks. The new law did not do this, but it did something almost as unwise, for it provided that member banks may borrow from Reserve banks on their own promissory notes, secured in any way satisfactory to the Reserve banks. These loans may be made for four months or less at a rate of interest only one-half of one per cent higher than the highest rediscount rate in

effect at the Reserve banks. This means that, while only eligible paper may be rediscounted, member banks may, in effect, turn their ineligible paper and other assets into cash at Reserve banks and may thus be protected from the logical results of their unsound policies in lending on real estate and securities, and investing directly in securities. This policy may give greater safety to depositors, but it is extremely doubtful that it will raise the standards of commercial banking.

Loans on Real Estate. The Act of 1935 also lowered the restrictions on real estate loans by member banks. These loans could formerly be made up to a total equal to 25 per cent of a bank's unimpaired capital and surplus, or 50 per cent of its savings deposits, whichever was greater; whereas the new limit is 100 per cent of capital and surplus, or 60 per cent of time and savings deposits, whichever is greater. The individual loans could formerly be made only up to 50 per cent of the value of the real estate, and for five years or less. Now they may be made for ten years and up to 60 per cent of the appraisal value, provided 40 per cent of the principal of the loan is paid in installments over the ten-year period. Moreover, such loans are renewable.

These new provisions relating to borrowing by member banks from Reserve banks and to real estate loans appear to us to be objectionable, though they are thoroughly approved by some writers on banking. These writers hold that investments and loans on real estate and securities have become an increasingly important part of the commercial banks' business in recent years and that, under the circumstances, it is silly to deny the banks access to the reserves of the System merely because they cannot supply the prescribed eligible commercial paper. If depositors are to be safe, the banks must be able to convert other assets into cash at the Reserve banks in an emergency. This is comparable to saying that commercial bankers must be allowed to wander into fields where they do not belong, but that the Reserve System must protect them against getting into trouble during their wanderings and thus causing loss to others. If the premise is granted, the conclusion seems to follow; but we suggest that it would be better to keep commercial banks strictly within the field of commercial banking, and thus prevent the mistakes which are largely responsible for the losses suffered by depositors. If commercial bankers will only run their businesses as they should, they may obtain adequate assistance from the Federal Reserve System in time of need, under the old provisions for rediscounting.

The Plan for Deposit Insurance. But if banks fail in spite of all that is done for them, the Act of 1935 has yet another safeguard for the depositors—for the Act provides for federal insurance of bank deposits through the Federal Deposit Insurance Corporation (hereafter referred to as the F.D.I.C.), whose original capital was furnished by the government and the Federal Reserve banks. All banks which were insured under

a temporary plan provided by the Act of 1933 may continue to be insured. Member banks are required, and non-member banks permitted, to take out deposit insurance. New national banks and state member banks must qualify for insurance before receiving their charters, and non-member banks not already insured may be granted insurance after passing an examination. The F.D.I.C. may deny insurance to any bank it considers unsound or unnecessary, and banks may withdraw from the insurance system at will, or may be excluded for violation of rules. By the middle of 1946, the F.D.I.C. was insuring the deposits of 13,330 commercial banks, or 95 per cent of the total.⁷ The insured banks had more than 92 million deposit accounts, and total deposits (including governmental and inter-bank deposits) of over \$140,000,000,000.

The F.D.I.C. provides insurance for each depositor of an insured bank up to \$5000. Persons having larger funds may secure full coverage by depositing with several banks. It was estimated in late 1945 that 96.4 per cent of all depositors' accounts *by number* were fully covered by insurance, though only 46 per cent of all deposits *by value* were similarly protected.⁸ The F.D.I.C. uses two procedures to fulfill its responsibility in protecting bank depositors from loss. It pays depositors up to the \$5000 maximum in insured banks placed in receivership, and it makes advances to facilitate mergers of weak insured banks with strong institutions. The first method is more commonly used.

Evaluation of Deposit Insurance. Deposit insurance may be criticized from several angles. From a technical point of view, it may be questioned whether it is wise to provide insurance at a flat premium for all banks without regard to the risk involved. In other types of insurance, the principle employed is to vary premiums as between classes or individuals, according to the degrees of risk represented. Moreover, a flat premium rate based on total deposits seems to discriminate in favor of small banks; for a small bank may secure practically complete coverage of its deposits by paying the flat premium on total deposits, while a large bank with many deposits over \$5000 may have only a fraction of its total deposits covered by insurance although it pays a premium based on total deposits. This discrimination is not necessarily undesirable.

Furthermore, there is some doubt that bank deposits are genuinely insurable. Our experience in the post-1929 depression showed that a considerable number of banks may get into trouble at one time, and if this should happen in the future the F.D.I.C. might have serious financial difficulties. It is argued that a risk, to be really insurable, must be one which will not result unfavorably for many or most of the insured at any given time. Fire insurance companies would hesitate to grant insurance if there were any likelihood that all or most of the insured properties

⁷ *Federal Reserve Bulletin*, September, 1946, p. 1034.

⁸ *Annual Report of the Federal Deposit Insurance Corporation*, 1945, p. 63.

would be destroyed by fire at any one time. A popular answer to this objection is that depositors will no longer take part in runs on banks, since they know that the government stands behind the deposits, but this answer is not wholly convincing. In spite of the protection provided by insurance, the deposits in a bank that fails will not be available for depositors the next day, or even the next week. Some little time will necessarily elapse before all depositors will be paid. Since this is true, the desire to have one's money now rather than later may lead to bank runs as in the past, and cause the F.D.I.C. real embarrassment. If necessary, the government would doubtless provide the corporation with additional funds to prevent its failure; but if the need for such governmental aid should develop, the "insurance" of deposits, as such, would appear to be unsound. It is entirely possible that bank deposits could be handled through the application of the accepted principles of insurance, by carefully selecting the banks where deposits are to be insured and charging premiums adapted to the risks, but many people have had doubts about our present system of insurance. Again, deposit insurance—especially insurance on a flat-rate basis—has been objected to on the ground that it may encourage recklessness on the part of some bankers since they know that, because of the insurance, their actions will not cause loss to their depositors.

Quite apart from these criticisms, it is appropriate to ask whether deposit insurance of some kind is or is not a necessary and desirable adjunct of a sound system of commercial banking. Our answer is in the negative, and the basis of this answer is a familiar one. If we were to assume that commercial bankers through unsound banking practices would continue, in the future as in the past, to get into difficulties which would result in serious loss to their depositors, then we should be inclined to endorse federal deposit insurance. But we object to this assumption, since we contend that the depositors in a soundly conducted system of commercial banking would be adequately protected, in general, without recourse to government assistance in this form. Hence, we cannot regard deposit insurance as the best possible method of safeguarding the interests of depositors.

On the other hand, many arguments have been advanced in favor of deposit insurance. It is said to be costless to the banks themselves. The argument is that the banks lose heavily whenever business men and other depositors lose their confidence in them, as they do after a period of bank failures, so that to buy insurance is cheaper than not to have it. It is believed that deposit insurance will stimulate the growth of savings deposits and prevent hoarding, and will aid in protecting sound banks against the runs which are common when weak banks fail. Finally, attention is frequently called to the helplessness of the depositors in the absence of insurance; to the inadequacy of the protection which they receive

through governmental supervision and examination of banks; to the public character of banking; and to its great importance in our national economic life, which makes it imperative to avoid bank panics if it is at all possible to do so.

The Results of Deposit Insurance. The fears that have been expressed about our system of deposit insurance have not been realized up to the present time, and the record of the F.D.I.C. has been favorable. In twelve years of operation, the F.D.I.C. paid out or set aside for payment some \$261,717,000 in connection with the failure or rehabilitation of 398 insolvent or hazardous banks. The F.D.I.C. estimates that only \$31,800,000 out of the \$261,717,000, or a little over 12 per cent, should be considered a total loss. The total expenditures of the corporation, including these final losses, amounted to \$73,400,000 in this period. The premiums paid by the insured banks brought in \$563,600,000 and the corporation received \$149,700,000 as investment and other income; hence the total income exceeded total expenses by \$639,900,000 over this period, and the surplus of the F.D.I.C. was increased by this amount.⁹

It also appears that the F.D.I.C. may be a strong force making for better banking standards in our system. It has the right to examine all insured banks, or to review the examinations of these banks. It actually examines all insured banks which do not belong to the Federal Reserve System, but it leaves the examination of national banks to the Comptroller of the Currency, and that of state member banks to the Board of Governors of the Federal Reserve System. It "cites" insured banks for violations of laws and regulations and for unsafe and unsound practices, and can terminate their insurance if they do not improve their behavior. Non-insured banks which desire insurance as non-member banks, insured non-member banks which wish to retire or reduce their capital or to establish or relocate branches, and insured banks of any kind which seek to assume the deposits of, or merge or consolidate with, non-insured banks, must obtain permission from the F.D.I.C. The F.D.I.C. has power to regulate the rate of interest paid by insured banks on time deposits, and banks are no longer permitted to pay interest on demand deposits. Finally, the operation of deposit insurance probably deters would-be bankers from starting unsound and unnecessary banks, since such banks may be refused deposit insurance and few people will care to entrust their deposits to banks that do not carry insurance of this kind.

THE NEED FOR FURTHER CHANGES

With safety for depositors already achieved, the chief problem of commercial banking in the United States is adequate control over the expansion and contraction of bank credit. Some students of banking problems

⁹ *Ibid.*, pp. 16, 32.

question that such control is possible so long as we have a separate system of commercial banking for each state, side by side with the Federal Reserve System for member banks all over the country. With forty-eight state banking systems, each operating under its own banking laws, and with the state-chartered banks at least partly beyond the reach of federal control, effective regulation of commercial banking as a whole is most difficult of achievement.

Compulsory Membership in the Federal Reserve System. From this point of view, the first step in genuine reform is to require every commercial bank in the United States to join the Federal Reserve System. This requirement would bring all commercial banks under one general plan, with the result that our national banking laws and regulations relating to elasticity, credit control, the relations of commercial and investment banking, and safety, would function much more effectively than in the past. It is important that this measure be enforced without any lowering of requirements, especially with regard to minimum capitalization for member banks. Indeed, it would probably be well to raise the minimum capitalization to a figure substantially above the present requirement. It may be objected that some state banks could not make the changes necessary to meet the requirements for membership in the Federal Reserve System. This is probably true; but the objection may be answered by saying that any bank which, given due notice, fails to measure up to the membership requirements is not an essential part of our commercial banking system and may well be eliminated.

Branch Banking. Many economists feel that, even if all commercial banks were members of the Federal Reserve System, we could not adequately control bank credit so long as we have some 14,000 independent banks in the country. They believe our commercial banking problems would be simplified if we adopted a nation-wide system of branch banking, such as that of Canada or England. In England, thirteen large joint-stock banks have some 9750 branches, while in Canada there are ten large banks with about 2850 branches.¹⁰ Under such a system, the United States might have (say) ten or twenty large banks, each with hundreds of branches, and our present small independent banks would be eliminated. At present, branch banking is permitted only to a limited extent in this country. According to a recent report, we have 1223 banks that have branches, and the branches number 4168, most of them being in the same city or county as the parent bank.¹¹

In support of branch banking, it is urged that a large bank with many branches could have a widespread industrial and geographical diversification of assets and liabilities which would prevent its being forced into

¹⁰ R. G. Thomas. *Our Modern Banking and Monetary System*, New York, Prentice-Hall, Inc., 1942, pp. 342, 343.

¹¹ *Annual Report of the Federal Deposit Insurance Corporation*, 1945, p. 98.

bankruptcy by local factors affecting certain types of loans, while its size would make it possible to bear heavy losses without becoming insolvent. Many of our recent bank failures have been those of banks with very small capital which have been unable to diversify their loans properly and have become insolvent when their principal form of loans turned out badly. Under branch banking, it is claimed, such loans could safely be made by the branches, because these loans would be combined with many other types of loans and the parent institutions would be so large that whatever losses occurred could be absorbed without serious difficulty.

A second reason for expecting a reduction in bank failures is that branch banking would probably provide what are now our smaller banks with a superior type of bank management. The great size of the parent banks would make it possible to employ the best of management, and all branches would benefit by this high-class managerial ability. In addition, it might be possible to require bankers to be carefully and completely trained before they were placed in positions of responsibility.

The claims for branch banking advanced thus far have dealt chiefly with safety, and the problem of safety has already been largely solved in the United States. However, it would be desirable to have a system in which safety results from the *inherent soundness* of the commercial banks. It seems improbable that branch banking would bring a significant change in the *ability* of money and credit to expand and contract. However, the *control* of elasticity might be somewhat more effective than under our present system. It might be easier to induce a few large banks to cooperate in the control of credit than to get cooperation from thousands of more or less independent banks; and, furthermore, the enforcement of banking laws and regulations might be simplified under branch banking. Of course, the problem of proper examination of the banks and their branches would still be a formidable one.

On the other hand, it is possible that the higher type of management under branch banking might be offset to some extent by the heavy cost of the central organization, the red tape involved in its operation, delays in making decisions, and an extensive division of responsibility. A system of branch banking might retard the economic development of the country. Small depositors and borrowers might be neglected because of the greater profitability of large accounts and the inability of small borrowers to furnish collateral security acceptable under the rules of the parent bank. Branch banks might find it difficult to adapt themselves to changing economic conditions. Large institutions often depend extensively upon formal rules and regulations in operating their business, and branch banking might result in a relative fixity of policy which would lessen the ability of the banking system to adapt itself to the varying needs of different sections of the country.

Finally, it is sometimes contended that branch banking might lead to

a concentration of power which we would find intolerable. Those in control of the few great banks might come into control of industry, and dominate fiscal and Federal Reserve policies as well. Since the branch banks would be operated for profit, such a financial monopoly might adjust the issuance of commercial credit to the needs of the country even less successfully than our banking system has done in the past, and conceivably create a situation in which the banks would be safe only because of their ultimate reliance upon the credit of the government.

In attempting to reach a decision on the desirability of branch banking, the crux of the whole matter seems to be whether the management of banking institutions would automatically be better under branch banking than under our present system of unit banking. Unless bank management improved, merely the large size of banks would be no positive guaranty of safety. Large banks with many branches *could* diversify their loans and investments to a greater extent than ordinary independent banks, but there is hardly certainty that they *would actually and automatically do so*. Countries with branch banking have had failures of banks with hundreds of branches, though in general the banking record of such countries in the great depression after 1929 was excellent. Of course, parent banks in America might be so large that the government could not afford to let them fail; but this type of safety would represent no advance over the present situation, for we have already decided that we cannot leave our independent banks free to fail.

We can scarcely deny that the excellent results obtained in other countries with branch banking systems have been largely due to superior bank management, but we are uncertain as to whether the better management has been the result of branch banking *per se* or whether it has resulted from the development, through the years, of an established tradition of sound banking plus the operation of all banks under a unified banking system and uniform laws. In Canada, for example, all commercial banks operate under a set of laws applying to the whole Dominion. Canadian commercial banks do not lend on real estate or engage in handling trust funds. They may not hold shares of bank stock, or make loans with such stocks as security. Their investments consist almost wholly of high-grade bonds or other securities which are quickly convertible into cash. Nor do they follow the common American practice of renewing a given short-term loan over and over again, until it amounts virtually to a fixed capital investment. Finally, the managers of Canadian banks are generally steeped in the principles of sound commercial banking, and have often risen from the ranks on the basis of merit alone. Such conditions might result in sound commercial banking in any country, whether or not it had a system of branch banking.

According to the supporters of branch banking, such superior management, practices, and policies *result from* having branch banking. If this

conclusion is valid, it follows that the United States should proceed to develop a complete system of branch banking as rapidly and enthusiastically as possible.

The Limitation of Commercial Banking. A vital need of banking in this country is an effective means for restricting commercial banks to the business of commercial banking. We believe that commercial banks should be forbidden to lend on real estate, for this is hardly a proper function of commercial banking. Loans on stocks and bonds should be permitted but sparingly, and then only with large margins of safety. The security investments of commercial banks should be limited to the highest and most liquid types of securities. The banks' power to make *fixed capital* loans to business men, by repeatedly renewing short-term *commercial* loans, should also be restricted sharply. Many of these types of loans and investments, which should not be made by strictly commercial banks, are appropriate for savings banks or for the savings departments of other banks; but, unless our commercial banks can learn to run their savings departments without becoming confused as to functions, it would seem desirable for commercial and savings banks to be entirely separate institutions. This comment is applicable also to trust departments now operated by commercial banks.

Under conditions such as these, there would probably be little need for deposit insurance, or for member banks to borrow from Reserve banks on the basis of so many types of security. We should no longer be troubled by an extension of deposit credit to many times the amount of money available for the conversion of deposits into cash. If the deposits of commercial banks were almost entirely the result of bringing cash items to the banks or discounting eligible commercial paper, there would be no need to have on hand, in the form of money, 100 per cent of the deposits which might have to be paid off at any time. That is, if the banks' deposits were backed almost wholly by liquid investments and by commercial paper eligible for rediscount, the banks could always secure cash at the Federal Reserve banks in quantities sufficient to stave off any run by depositors; and we should not need to liberalize the conditions for rediscounting or provide deposit insurance. The deposits of a *sound* commercial banking system are safe without outside guaranty.

The Development of Better Bankers. Perhaps our greatest need in American commercial banking is better bankers, rather than better banking laws and regulations. Many an authority on banking, wearied by the adoption of countless banking laws which appear to bring little improvement, has suggested that our commercial banking system has been overburdened with legislation but insufficiently governed by sound credit policies and practices on the part of bankers. The American attitude toward banking problems has been that, if we could pass large numbers of good laws, we should get good banking; but actual experience gives

ample grounds for suspecting that it is difficult, if not impossible, to make good bankers by legislation. We have tried, by laws and regulations, to prevent banking practices which bankers in other countries, under the influence of tradition and custom, would regard as unthinkable even in the absence of laws and regulations.

No body of banking laws can be so nearly perfect that bankers cannot, if they wish, find loopholes for employing methods which may eventually have serious consequences to their own businesses and to other members of society. If banking is to remain in private hands, there is no adequate substitute for the sound judgment of bank officers as a safeguard against the improper use of credit; and it seems clear from past experience that an improvement in banking personnel must be an integral part of any advance in commercial banking. There is need for an understanding of the relation of commercial credit to the rest of our economic structure, and an appreciation of the fact that a loan may be sound and profitable in and of itself and yet, in conjunction with thousands of similar loans by other banks, disastrous for the system as a whole. It was once the custom in a certain European country for the head of a wrecked bank to take his own life, instead of hiring a battery of lawyers to defend him or departing posthaste for foreign and sunnier climes. Without going so far as to advocate such harsh measures, we are firmly convinced that our bankers must be made to recognize their obligations—that they must be brought to regard banking as a kind of public trust instead of, or at least as well as, a business conducted for private profit.

1. What conditions must be fulfilled if elasticity of money and commercial credit is to be attained?
2. "The function of money and credit is to facilitate, but not to determine the nature and content of, economic activity." Explain.
3. How was the Federal Reserve System, under the powers originally granted it, expected to control the expansion and contraction of credit?
4. Were the powers vested in the System adequate for this purpose?
5. "Open-market operations and changes in rediscount rates are really only different phases of a single method of credit control." Explain.
6. How have the powers of the Federal Reserve System for controlling the expansion of commercial credit been strengthened in recent years?
7. Explain the importance of the Board of Governors' power to alter the reserves required behind the demand and time deposits of member banks.
8. "The new powers of the Federal Reserve System for controlling the expansion of credit have not received a fair trial up to the present time." Explain.
9. Give some idea of the number of failures of member and non-member banks from 1921 to 1933, and from 1934 to 1945.
10. What was the leading cause of member bank failures in the depression years 1929-1933?

11. Recent banking legislation is said to have provided for the separation of commercial and investment banking. What is the meaning of this statement?
12. How did the Banking Act of 1935 change the terms on which member banks may borrow from Federal Reserve banks? Explain.
13. Explain the federal plan to insure the deposits of commercial banks under the Banking Act of 1935.
14. What problems arise in connection with a plan of deposit insurance such as we now have in the United States? Explain.
15. Is deposit insurance a necessary and desirable feature of a sound commercial banking system? Why or why not?
16. What other changes affecting the safety of depositors were included in recent banking laws? Explain.
17. Why do banking laws and regulations for credit control affect also the safety of depositors?
18. Should all commercial banks be required to become members of the Federal Reserve System? Explain.
19. Present the arguments for and against branch banking as a solution of our banking problems in the United States.
20. "A national system of branch banking should be adopted in the United States." Discuss.
21. Should we require that commercial banks limit themselves strictly to commercial banking? Explain.
22. "Even the best of banking legislation will not necessarily give us a sound system of commercial banking." What more is needed, and why?

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Investment Banking

AN INCREASE IN POPULATION USUALLY MEANS AN INCREASE IN ECONOMIC machinery to supply the newcomers with commodities and services. An increase in individual purchasing power, permitting the use, by those in the lower income groups, of comforts or minor luxuries which have been denied them in the past, likewise leads to an expansion in productive facilities. Finally, every new invention of a practical nature—such as the automobile, air conditioning, or television—means the construction of buildings and equipment that will promptly place the new good in the hands of all who are able and willing to buy. Hence, in all economically progressive countries there is a continuing demand for fresh supplies of fixed capital with which to increase the output of economic goods.

THE NATURE OF INVESTMENT BANKING

Funds to be expended for fixed capital may be, and sometimes are, provided by the business enterprisers who use them; and, again, they may be procured by enterprisers directly from private individuals who are looking for investments which they expect to pay them a satisfactory return from year to year. But financing of this kind—directly from saver to enterpriser—is likely to be on a rather small scale, and to relate to the individual proprietorship or partnership form of business organization. Also, in instances of direct borrowing the enterpriser is usually personally acquainted with those who entrust their funds to him.

Investment Bankers. It is much more common, however, to handle loans for fixed capital through banking houses that make a specialty of dispensing credit for permanent investments. Because of the need for agencies of this kind in a rapidly growing industrial society, there have developed in the United States a number of investment banking concerns, whose job is to gather together the savings of many individuals and place them at the disposal of the few who can use them to advantage in the conduct of business ventures.

The process of collecting savings is carried on indirectly in most cases. That is to say, investment bankers do not as a rule come into direct contact with those whose funds they invest, unless the latter happen to be persons of great wealth whose accumulations are sufficiently extensive to warrant

individual attention. For the most part, the established investment banking houses secure their funds by floating issues of stocks and bonds of concerns that are about to be launched, or of established concerns that can use to advantage additional quantities of fixed capital.

The "Selection" of Investments. The process of financing a large business undertaking is far from simple. For convenience in discussion, the process is often divided into three parts—selection, underwriting, and distribution. If a group of business men should need to secure many millions of dollars' worth of capital for a new industrial project—say, the manufacture of plastics or television receiving sets—or should they wish to expand the plant or equipment of a going concern, they would be likely to open negotiations with a great investment banking house, such as J. P. Morgan and Company, or Kuhn, Loeb and Company, and request that this financial concern undertake to float an issue of stock or bonds, or perhaps both. If the banking house had no intimate knowledge of the project in question, it would undoubtedly make a careful investigation of all pertinent facts before agreeing to finance the operation. Of prime importance is the salability of the new securities, for investment bankers are seldom interested in buying stocks and bonds which they cannot readily dispose of. But of almost equal importance is the safety of the project under consideration; for an investment banking house is known by the securities it sells, and its reputation is safe only as long as its customers are pleased with their purchases. Hence there is need to ascertain that the business to be financed is entirely sound, and that its securities represent a safe as well as profitable investment.

"Underwriting" and "Distribution" of Securities. If, with all necessary information at hand, the investment banking house decides to undertake the task of providing the desired funds, it guarantees (or "underwrites") the sale of the necessary stocks or bonds, or both, within a specified time. The investment banker buys these securities from the company at a figure lower than the anticipated market price, so that he may reasonably expect to make a profit from their sale. Now comes the task of disposing of the securities. To this end, the investment house usually proceeds to form an "underwriting syndicate," a temporary association made up of a number of other investment houses that are given an opportunity to join in the sale of the securities in question.

Each of the several underwriting concerns guarantees that certain amounts of the securities will actually be sold. The original banking house now offers these securities for sale to the public at, of course, a higher price than was paid for them. If the entire issue is sold without difficulty, each of the participating concerns is rewarded on the basis of the quantity that it individually underwrote, or guaranteed. If, on the other hand, some of the securities remain unsold after a specified time, they are divided among the underwriting houses in proportion to their guaranties, and

are sold by each to investors on terms as advantageous as can be secured.

Underwriting, it will be seen, involves the principle of insurance, and is one of the many devices used in the business world for "spreading the risk." An investment house would usually rather have a one-twelfth interest in each of a dozen good securities, than complete responsibility in a single stock or bond that has been issued in huge quantities.

Investment bankers are sometimes called "security merchants," the great banking houses that float issues of stocks and bonds being known as wholesalers and the smaller underwriting houses as retailers. The commercial banks also play an important part in the business of providing investment credit, since they lend extensively to investment banking houses, accepting as security for the payment of the loans the stocks or bonds that the underwriters have taken over from the Morgans, the Kuhn, Loeb, and other large issuing concerns.

Our organized security exchanges, such as the New York Stock Exchange and the New York Curb Exchange, are another agency in the distribution of securities. In the course of time, most important security issues are listed on an exchange and the exchange becomes a market place in which the securities are bought and sold. The promoters of an issue sometimes manipulate the market in such a way as to cause a gradual rise in the price. This is done by offering to buy the security at progressively higher prices day by day. Thus, a stock that is being manipulated by a "pool" of bankers who are interested in disposing of large numbers of shares might sell today at \$30 a share, tomorrow at \$30.25, the next day at \$30.50, and so on. Certainly no shares will be sold at less than the price offered by the pool, since holders of shares will naturally sell, if at all, at the highest price obtainable. As the price keeps rising, the general public, noting the steady increase and scenting big future profits, is drawn into the market and this new demand for shares aids materially in distributing the issue. This is one of the questionable practices restricted by the Securities Exchange Act of 1934, which we shall examine later in the chapter.

Though not all of the securities issued through investment bankers are listed on the organized exchanges, the largest, most important issues are eventually listed. At first, many of these stocks and bonds get largely into the hands of buyers who are speculatively inclined, and who are likely to sell out in a few weeks or months and pocket the gain to be realized through whatever price increase has taken place since the date of purchase. But once a stock or bond has become established as a dependable security paying a satisfactory return, it comes more and more extensively into the possession of investors, who buy primarily for the purpose of getting a steady income from their purchases.

Reinvested Earnings. Another important means of accumulating funds for the purchase of fixed capital is the reinvestment of part of the earnings of business concerns. It is now a very common practice for great corpora-

tions not to distribute to their stockholders in the form of cash dividends as much as has been earned in a given period, say a year. Not only does the successful business enterprise usually establish a surplus fund from which to meet deficits and pay dividends in unprofitable years, but a part of the profits of good years is often laid aside with the deliberate intention of using it for expanding the business—that is, for providing fixed capital. The growth of the Ford Motor Car Company from an original investment of only \$28,000 to one measured in hundreds of millions was accomplished wholly through the device of reinvested earnings, no new capital funds having been added to the business except those withheld year by year from the tremendous earnings of this company.

While additions to new capital from reinvested earnings are not so large as the additions made through the sale of stocks and bonds, they nevertheless form a very significant part of the capital accumulations of this country. Of course, earnings that are allocated to surplus add to the value of the business, and in the case of corporations are reflected in the enhanced value of the stock outstanding, provided no additional shares are issued. But boards of directors frequently issue stock dividends in lieu of cash dividends, and this action tends to hold down the selling price of the shares. On the other hand, it puts new shares in the hands of the old stockholders, who if they wish may convert their new holdings into cash by selling them to others. But whether the new shares are held or sold, the new capital funds which they represent are in the possession of the corporation. With the use of these funds, expansion may proceed without the delay and expense that might be entailed had the corporation attempted to secure these funds through the sale of stocks and bonds.

Agencies for the Collection of Savings. By whom are industrial stocks and bonds purchased? Ultimately, of course, by the general public or by that portion of the public that earns more than it spends for consumption purposes. But in many cases the savers of income invest it not directly, but through an intermediate agency of one type or another. Commercial banks, savings banks, insurance companies, and endowed institutions of many kinds have funds to invest from time to time. Since these funds are not likely to be called for soon, or to any appreciable extent, they are largely available for long-term investment, provided the investment is safe.

Because many of these savings belong to persons of rather limited financial resources, there is special need for security; and certain institutions, such as insurance companies and savings banks, are restricted in the uses to which their available funds may be put. Though the individual investment in insurance or in a savings account is frequently small, the total accumulation of this kind is great. Total time deposits in this country had reached, by September, 1947, the imposing total of 56 billion dollars, of which 21 billion were funds entrusted to mutual savings banks and the Postal Savings System.

PROBLEMS OF INVESTMENT BANKING

Many problems of individual and social significance have arisen in connection with investment banking. One is the necessity of providing the greatest possible degree of safety for purchasers of the securities issued by investment banks. Investors must be protected from securities that are fraudulent in character, and from security salesmen who grossly overstate the possibilities of the stocks and bonds they offer to the public.

Another important problem is to insure that investment banking shall be carried on efficiently and in a manner consistent with the public welfare. More specifically, this means that investment credit must not be so extended at certain times and so restricted at others that its issuance becomes an important cumulative factor in causing business instability. It means, also, that this credit must be distributed among the industries seeking it, so as to coordinate the creation of new productive facilities with the desires of consumers. Finally, it is important that investment banks, in performing their function, shall not be permitted to get a strangle hold on industry by threatening to withhold needed credit if such control should be denied them.

Safety for Investors. Those who have securities to sell are frequently more optimistic as to the future of their stocks and bonds than the situation warrants. Consequently, many of the securities sold to the public have turned out to be worthless. This failure of securities to live up to the representations of the sellers is by no means a new economic phenomenon. Indeed, it is as old as the corporation itself. The fleecing of the public through the sale of worthless securities has led to the adoption, by forty-three states and the District of Columbia, of laws regulating the sale of securities and, in some cases, providing for the recovery of losses incurred by those to whom they have been sold in violation of law.

But the widespread purchase of stocks and bonds in the boom period preceding 1929, followed by the loss of an estimated 25 billion dollars by the American purchasers of valueless securities, brought the question of investment frauds to a head. The result was the passage of two federal measures, the federal Securities Act and the federal Securities Exchange Act.

The Federal Securities Act. The federal Securities Act was passed in 1933. Its purpose was "to provide full and fair disclosure of the character of securities sold in interstate and foreign commerce and through the mails, and to prevent frauds in the sale thereof."

Without intending to interfere in any way with the enforcement of state legislation dealing with the sale of securities, this federal law was designed to insure that the buyer of stocks and bonds should be fully informed as to the standing of the company in which he was investing. The issuer of a security was required to file with the Federal Trade Commission up to

September 1, 1934, and thereafter with the Securities and Exchange Commission (a commission of five members appointed by the President of the United States) a registration statement which contained all information about the security which an investor needed to know. Until this statement was filed, the security could not be sold or offered for sale through any agency of transportation or communication in interstate commerce or through the mails. Once the statement was filed, the seller had to provide every buyer with a prospectus, which in reality was a summary of the information contained in the registration statement.

The Act also provided for the civil liability of security issuers to investors suffering losses, if the registration statement or prospectus contained false information or omitted material facts. All who shared in misleading the investors, including the issuing corporation, the original investment bank marketing the security, the underwriters, and even accountants and other experts, were held liable. As originally passed, the liability provisions were very severe. Purchasers of securities could recover in court their full losses on the securities, even though the false information or omissions in the registration statement or prospectus were not the cause of the loss, or were only a partial cause. The Act permitted recovery of losses by anyone buying a security, whether or not he ever saw or relied upon the statement containing the false information or omission. Each member of an underwriting syndicate was held liable to all purchasers of a security, including the customers of other members of the syndicate as well as its own customers, and suit could be brought for the recovery of losses at any time within ten years after the public offering of the security.

Appraisal of the Federal Securities Act. The federal Securities Act aroused a good deal of protest. There was general sympathy with the aims and purposes of the Act, but it was felt that the law was unduly severe in prescribing liability for security issuers and sellers. It was held that the Act assumed guilt on the part of all connected with unfortunate security issues unless they could prove their innocence, and that it would foster litigation, false claims, and nuisance suits. It was pointed out that not all information connected with a business could be furnished to the Commission and that a fact, originally omitted from the registration statement as unimportant, might later appear to be material and relevant. Some critics even expressed a fear that the investment banking business might be practically exterminated because of the great dangers and liabilities that would have to be borne by corporations, investment bankers, and underwriters.

As a result of these protests, the federal Securities Exchange Act of 1934 amended the federal Securities Act in several respects. The purchasers of new securities may now recover full losses, without regard to causation, unless the defendant can establish that the loss was not caused, or was

only partly caused, by the false information or omissions of the registration statement or prospectus. If a person buys a security before the publication of the first twelve-months' earnings statement of the issuing corporation after the date of registration, it is assumed that he relied on the information in the registration statement and prospectus. If the security is purchased later, reliance on the information must be proved. No member of an underwriting syndicate is now liable for an amount in excess of the aggregate price of his share of a security issue, and a suit to recover a loss must be brought within three years after the public offering of the securities.

TABLE 38. NEW CAPITAL FUNDS RAISED IN THE UNITED STATES, 1929-46

(Source: Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics*, p. 487; *Federal Reserve Bulletin*, March, 1947, p. 302)

(In millions)

Year	Total New Security Issues ^a	Total New Corporate Security Issues	Year	Total New Security Issues	Total New Corporate Security Issues
1929	\$10,093	\$8,002	1938	\$2,360	\$ 873
1930	6,912	4,483	1939	2,277	383
1931	3,095	1,551	1940	1,951	736
1932	1,197	325	1941	2,854	1,062
1933	720	161	1942	1,075	624
1934	1,386	178	1943	642	374
1935	1,457	404	1944	913	646
1936	1,972	1,192	1945	1,772	1,264
1937	2,138	1,225	1946	4,588	3,506

^a Excludes refunding issues and direct issues of the United States government, but includes issues of foreign and domestic corporations, foreign governments, farm loan agencies, and states, municipalities, and territories.

The results of the operation of the Securities Act of 1933 have been both favorable and unfavorable. There is no doubt that a law encouraging honesty in the sale of securities was necessary for the protection of investors; but the Securities Act, even with the amendments noted above, was so drastic a measure that, besides preventing abuses, it has interfered seriously with the normal functioning of the investment banking business. The Act cleansed and purified the issuance of securities, but relatively few corporate securities have been issued, as the data in Table 38 indicate. From 1933 to 1945, inclusive, new corporate security issues in no year exceeded 15.3 per cent of those issued in 1929, and usually fell well below even this meager level. And, if it is objected that 1929 is an unfair year for purposes of comparison, we may say that there was no year from 1933 to 1945, inclusive, in which the total value of new corporate securities amounted to as much as 50 per cent of those issued in 1923—a year before

the period of large security issues in the late 1920's began.¹ In the reconversion year of 1946, new corporate security issues struggled up to about 44 per cent of the 1929 volume.

It is true, of course, that the years 1933 to 1940 were not very prosperous ones, but, according to modern business cycle theory, one cannot logically charge a depression with *causing* a shortage of investment, for a shortage of investment *is* a depression. Moreover, physical conditions in the late 1930's were favorable for heavy investment, since industrial plant and machinery had become increasingly decrepit during the long depression and housing construction had been lagging for many years. It is likely, then, that the Securities Act had a sharp restraining effect on the issuance of new securities, and the reasons are not far to seek.

Under the rulings of the Securities and Exchange Commission, the prospectuses furnished to investors have always run over 20 pages in length, and 70 pages are very common.² The registration statements which the Commission requires are far more elaborate and voluminous. Both documents must be checked and doublechecked by expensive lawyers and accountants, and the cost of preparing them has run as high as \$150,000 or \$200,000 in individual cases. Moreover, it takes a brave man to accept legal responsibility for all the facts contained in a 70-page prospectus or a registration statement which may run into several volumes. It is small wonder that corporations have hesitated to issue new securities. The remedy for this situation is obvious. Registration statements should probably be abandoned altogether, and it should be made possible for prospectuses for investors to be brief, although their legal characteristics should be retained. That is to say, the prospectus should reveal the material and relevant facts, and should be a document on the basis of which men may be sued for damages or otherwise punished if they falsify or omit material facts. In this way the objectives of the Securities Act could be attained without preventing the issuance of worth-while securities.

The Securities Exchange Act. In any case, the Securities Act did not afford full protection to investors, since it covered only new security issues and many investors had lost their all by purchasing securities already existing on the exchanges. Moreover, while most bonds are publicly offered, many issues of stock were formerly distributed through the security exchanges, often by manipulative practices of the type cited earlier in the chapter. For example, when an issue of stock was to be distributed, the first step was to register it, say on the New York Stock Exchange. Then the owners of the issue would make it appear active on the exchange by hiring brokers both to buy and to sell the issue for the account of the owners. For a time they might have to buy more than they sold, so that the price

¹ B. M. Anderson, in *Financing American Prosperity*, New York, Twentieth Century Fund, 1945, p. 38.

² *Ibid.*, p. 39.

of the stock would show a steady rise. But eventually the public, attracted by the activity and price rise of the stock, would come into the market; and then the brokers, by selling more shares than they bought, could distribute the issue at the artificially high price.

The Securities Exchange Act, passed in 1934, aims to discourage such practices. Besides amending the federal Securities Act of 1933, as previously noted, it requires all security exchanges, unless exempted by the Securities and Exchange Commission, to be licensed by the Commission after furnishing certain required information. Every security issue listed on the exchanges must also be registered with the Commission by the issuing corporation. The registration statements must contain facts in ten categories enumerated by the Act, in addition to any further financial statements which the Commission may deem necessary. The corporations may also be asked to file certified reports periodically. The result is that many corporations are now required to register with and furnish information to the Commission, although they would have been exempt from such obligations under the federal Securities Act of 1933 because they have not recently attempted to issue new securities.

Control of Manipulative Practices. The Securities Exchange Act attempts to define, or give the Commission power to define, the functions of brokers, dealers, and specialists, and forbids certain manipulative practices under penalty of \$10,000 fine and two years' imprisonment, or both. Under this Act, pools which are organized to make money by forcing the prices of certain securities up or down may no longer use publicity to advance their interests. They are prohibited from circulating false and misleading information about a security, from circulating any information, true or false, about prospective rises or falls in prices because of pool activity, and from paying anyone directly or indirectly for circulating such information. The creation of fictitious market activity is also forbidden. That is, it is now unlawful for any person, directly or indirectly, alone or with others, to effect a series of transactions in a registered security creating actual or apparent trading in such security or raising or depressing its price to induce purchase or sale by others. It is illegal to use the facilities of the exchanges, or of interstate commerce, or to use the United States mails for such purposes.

Corporate directors, officers, and stockholders who own 10 per cent or more of an issue of securities must file a statement with the Commission setting forth their holdings, and must report changes in ownership during each month. If officers and directors buy and sell the securities of their own corporations within a six-month period and make a profit, the gain belongs to the corporation and may be recovered by legal action. Moreover, these officers and directors are not allowed to make "short sales" of the stocks of their corporations, in order to profit by declines in the prices of these securities. Short-selling, as a manipulative device, is brought

under the Commission's control, to be regulated as it may deem advisable. It may require exchanges and exchange members to report short sales daily, and to report the coverage of short sales. "Pegging" the price of a security, through purchases by its sellers while the security is being marketed, is tolerated only under rules and regulations to be laid down by the Commission. Finally, the Board of Governors of the Federal Reserve System is given the power to control margin requirements for borrowing on securities.

Appraisal of the Securities Exchange Act. Our appraisal of the Securities Exchange Act must be similar to that of the Securities Act. There is no doubt that the security exchanges and manipulative practices on the exchanges could stand some regulation or that the Act, as administered by the Commission, has been successful in cleansing and purifying the exchanges and their activities. On the other hand, it is equally clear that the Act and its administration have reduced activity on the security exchanges to a low level and made the market for securities "thin." That is, large changes in security prices now occur on the basis of relatively small volumes of buying or selling. For example, on twelve days in 1930 and 1931, over 13,000 shares were sold for each one per cent decline in stock prices and over 23,000 shares for each decline of one dollar. On twelve days in 1936 and 1937, only 4700 shares were sold for each one per cent of decline in stock prices and only 6700 shares for each decline of one dollar. On September 7, 1937, the figures were 2100 and 3400 shares, respectively.³

The dearth of speculative activity and the thinness of the market are due to a number of factors, some of which, such as high taxes on income in general and on capital gains in particular, are unconnected with the securities and exchange legislation. On the other hand, there are several phases of the Act and its administration which have interfered greatly with activity on the exchanges. The regulation of the buying and selling of the securities of their own corporations by officers and directors has prevented these individuals from taking advantage of inside information to make a profit on the exchanges, but it has also kept them from buying to support the prices of their securities when they felt the prices were becoming unwarrantably low and from selling these securities when they thought the prices were becoming unduly high. High and inflexible margin requirements, severe regulation of the activities of specialists and floor traders, and the Commission's practice of questioning brokers and their customers concerning individual transactions on the exchanges have also operated to restrain legitimate speculative activity. Many of these matters could be corrected by a more liberal administration of the Act by the Commission, without changes in the Act itself and without great danger to its basic and desirable objectives.

³ *Ibid.*, p. 40.

The Total Volume of Investment Credit. While important though somewhat too drastic steps have been taken in the direction of providing safety for investors, very little has been done about certain other problems in the field of investment banking. One problem which must be faced in any economic system is the relative distribution of productive resources between (1) providing for present consumptive wants and (2) providing for the future through the production of capital goods. So long as productive methods remain the same and productive resources are scarce, we can enjoy a more abundant life in the future only at the expense of present consumption. Both saving and investment are necessary to the production of capital goods, and the investment bankers, through their sales of security issues, are supposed to coordinate these processes.

Prior to 1933, the investment bankers performed this function with only moderate success, for their business operated by fits and starts. In times of business prosperity, investment credit would sometimes flow in a veritable flood and get well in advance of current savings available for investment, since commercial banks would lend funds to customers to enable them to acquire securities on the installment plan. Such periodic overextensions of investment credit were partly responsible for building up the business booms which in turn gave way to depressions. At other times, the flow of investment credit would dry up until it was a mere trickle, although saving would go on at a moderate rate at least. Since 1933, the flow of investment credit has fluctuated considerably from year to year, but the total volume issued by the investment bankers has been so low at all times that its instability has undoubtedly been less important than formerly.

Of course, the investment bankers are not wholly to blame for periods of over- and under-investment, much less for business booms and depressions. Indeed, we have already seen that they are middlemen in the investment process, acting in response to the demands of business for investment credit and the demands of individuals and institutions for securities. The bankers could scarcely market securities in dangerously large quantities unless corporations wanted huge amounts of investment credit and people could be found to buy the securities at such times. And security purchasers could not indulge their wild desire to get rich quick by buying stocks and bonds unless the commercial banks lent the funds necessary to finance these purchases. However, the investment bankers must accept some responsibility for the instability of their business.

Those who engage in business in our modern economic system find it necessary to forecast future economic conditions, such as the probable extent of markets and the prices of certain commodities. In days of prosperity, they become unduly optimistic and overestimate future earnings. This is as true of investment bankers as of business men in general. When business is good, profits are large, security prices are mounting,

and the future demand for consumption goods and the facilities for producing them seems unlimited, it is easy for investment bankers to overestimate the need for investment credit. And, because of the crucial importance of the extension of investment credit, the mistakes of investment bankers are likely to have rather wide repercussions.

The Distribution of Investment Credit Among Industries. The achievement of an appropriate distribution of investment credit among industries and businesses has been another problem of investment banking in the past. Since the quantity of funds available in our economic society is not sufficient to finance all the undertakings in which business men would like to engage, it is clear that some enterprisers will get the funds that they want while others go without. And since most of our industrial financing in the past was done through the investment banking houses, it is equally obvious that our investment bankers have exercised a large degree of control over production. In a very real sense, they have held the power of life and death over a large part of the productive activities of the economic world, since they were in a position to provide the funds that a given concern needed and thus insure its operation, or veto its appeal and thus seal its doom.

The best interests of society require that whatever capital funds there are shall be distributed in such a way as to promote the most essential industries—that is, those which will contribute most to the welfare of society as a whole or whose products are most needed and desired by the people. However, the investment bankers were motivated by the desire for profit in distributing investment credit among industries and tended to extend the credit to those firms and industries which could pay most for its use. In many cases the firms and industries which could bid most effectively for investment credit were also those which deserved to receive it from the social point of view, but we could not expect this to be universally true. Thus funds might be directed by profit-seeking bankers into the construction of palaces for multimillionnaires, leaving none available for the building of “model apartments” for working people, even though the millionnaires were already magnificently housed and the workers were living in slums.⁴

The Domination of Industry by Investment Bankers. Investment bankers have often required, as a condition of issuing investment credit to a corporation, that the corporation appoint on its board of directors one or more members of the banking house, ostensibly for the purpose of insuring the safety of the security issue. This requirement appears innocent enough on the surface, but Americans in general were some-

⁴ While the problem of allocating investment credit among industries would continue to be important, the control of this distribution by investment bankers would no longer be a significant issue if these bankers, in the future as in the recent past, provided only relatively small total sums of investment credit for industry.

what startled, some years ago, to learn that one investment house in this country, together with its dependents and allies, was represented by directorships in corporations with net assets of some 74 billion dollars, or about one-fourth of the total of American wealth at the time. This power was centered in the hands of some 167 persons in the banking house, and they held 2450 interlocking directorships in corporations.⁵ It is difficult to say to what extent investment bankers control the policies of corporations at present, but certainly it would be socially undesirable for this control to develop so far that a small group of private persons, acting as investment bankers, could dominate the economic activities of the country.

A Proposed Solution. We have already seen that the problems of investment banking declined in importance after 1933 because of the very low level of activity which prevailed in the investment banking business. During the period of World War II, these problems became still less significant, for the government acquired and used a very large part of the savings of the country. Thus in 1945, when new corporate security issues amounted to only 1264 million dollars, net savings of individuals in the United States were in the neighborhood of 35 billion dollars and the gross federal debt increased by about 57 billion dollars.

Some people argue that, in the post-war period, we should proceed to put the investment bankers out of business entirely and socialize the extension of investment credit. The government would presumably absorb the savings of individuals through the sale of government bonds, and delegate to a board, probably one similar to the Board of Governors of the Federal Reserve System, the task of distributing investment credit among the industries and businesses of the country. The board would be appointed by the President of the United States. Its members would serve long terms, which would expire in rotation. They would be paid adequate salaries and be required to sever all private business connections.

In this way, it is claimed, the problems which we have discussed would be solved. There would no longer be any question of the issuance of fraudulent or worthless securities. The board would regulate the total volume of investment credit in accordance with the needs of society, and would not be induced, by any considerations of profit or loss, to over-expand credit at certain times and limit it unduly at others. All the savings absorbed by the government would be put to some productive use. The board's aim would be to distribute credit among our economic activities so that those which needed further development would be expanded, while the others would be held in check—for the members of the board would have no reason for preferring one industry to another.

⁵ H. W. Laidler, "Have We a Money Trust?" in *The World Tomorrow*, September, 1931, pp. 282-284.

Finally, the danger of domination of the country's economic activity by a small group of private bankers would be removed.

Criticism of the Plan. It seems far from certain that the governmental ownership and operation of investment banking would actually solve all of these problems, if all or most other industries and businesses were left under private ownership and operation. We may admit that the problem of safety for investors would be solved, but it would seem that a government board, like private bankers, might be too optimistic at certain times and too pessimistic at others, so that the issuance of investment credit might be marked by wide fluctuations as in the past. It would be no easy matter for the board to determine society's true need for investment credit from year to year. The problem of distributing such credit among industries and businesses in accordance with the social need would still be a difficult one, and mistakes could be made by a government board quite as well as by private bankers.

Finally, the board would eventually influence economic activity far more strongly than the investment bankers have ever done, and there is no assurance that governmental control would provide a remedy for the ravages of private control. Under governmental ownership and operation, the issuance of investment credit might be backward rather than progressive, so that new industries could not develop as in the past, because of the government's unwillingness to assume risks. The issuance of investment credit would be involved in red tape and subject to political control, and political "pull" would be used in obtaining desired funds.

If the governmental ownership and operation of investment banking were to be accompanied by the socialization of all or almost all of the other industries and businesses of the country, we may concede that the problems of investment banking as a private business could be solved or would disappear. However, in that case we would have on our hands a planned and controlled socialist economy, and would have solved or eliminated the problems of capitalism by accepting those of socialism. Could we keep any significant degree of economic and political freedom in a planned socialized economy? Would such an economy be efficient and progressive? Would it furnish a high level of income? Would individuals have adequate incentives? Could economic planners suit production to basic human needs and desires more effectively than the capitalistic price system does? Questions of this sort will be discussed at length in Chapter 49. For the present we merely suggest that such things as a degree of instability in economic activity and some inefficiency in the distribution of resources among industries may be part of the price we have to pay for the privilege of living in a free society.

1. What are the ways in which business enterprisers may obtain funds for investment in fixed capital?
2. What is the function of the investment bank?
3. Explain what is meant by the "selection," "underwriting," and "distribution" of securities.
4. Show the way in which fixed capital is provided through the reinvestment of earnings.
5. What are the problems of investment banking?
6. Explain how the problem of providing safety for security purchasers became acute in recent years. How did the federal Securities Act of 1933 undertake to provide this safety?
7. Criticize the federal Securities Act both constructively and destructively.
8. "The federal Securities Act, besides preventing abuses in the issuance of securities, has interfered seriously with the normal functioning of the investment banking business." Explain.
9. Why was additional legislation necessary for the protection of security purchasers? How was the Securities Exchange Act of 1934 supposed to be helpful in this connection?
10. "The results produced by the Securities Exchange Act and its enforcement have been both favorable and unfavorable." Explain.
11. What problem exists in connection with the total volume of investment credit issued by investment bankers? To what extent are the investment bankers themselves responsible for the existence of this difficulty?
12. Do investment bankers distribute investment credit among industries and businesses in true accordance with society's needs? Explain.
13. "It is obvious that our investment bankers exercise a large degree of control over production." In what way?
14. Can the problems of investment banking be solved while this business remains in private hands?
15. "The socialization of the investment banking business would readily solve or eliminate all of the problems of investment banking." Discuss.

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Price Levels

THE STUDY OF PRICES, AS PURSUED BY ECONOMISTS, FOLLOWS TWO MAIN LINES of inquiry. The first of these seeks to explain the forces that determine the prices of individual commodities and services.¹ The second line of inquiry has to do with general, or average, prices. The general prices of one time are compared with the general prices of another time, and an effort is made to measure and explain any changes that may have taken place. The general prices of a given time—say, of the year 1947, or of a single month of that year—are frequently called a “price level.”

THE DETECTION AND MEASUREMENT OF PRICE LEVEL CHANGES

General prices at different times, say in two or more different years, may be compared through the use of a device known as the “index number.”

The Making of Price Index Numbers. Index numbers of general prices are constructed by choosing a *base year*, in which general prices are given a rating of 100, and then giving to prices of other years ratings either higher or lower than 100, depending upon whether the prices of those years are higher or lower than the prices of the base year.

The principle of index numbers will be better understood if we consider a simple table and describe, with actual prices, the manner in which the index numbers are arrived at. Table 39 is made up of the prices of five commodities for the years 1926, 1920, and 1947. The prices here given are from wholesale quotations of those years. Wholesale prices are used because accurate wholesale quotations can be secured more readily than accurate retail prices, and, moreover, they vary less throughout the country than retail prices.

The year 1926 has been chosen as the base year. The individual prices of that year are added, and to this aggregate is given a rating of 100 per cent. The percentages for the other two years are arrived at by comparing the aggregate prices of those years with the aggregate for 1926. Dividing the aggregate for 1920 (\$1.79) by the aggregate for 1926 (\$1.55), and

¹ Individual prices were dealt with in vol. I (chaps. 12–17).

multiplying by 100, we get the index number of 115 for 1920. In like manner we arrive at an index of 128 for 1947. The index number for 1926, the base year, is, of course, 100.

Weighted and Unweighted Index Numbers. These three index numbers are "unweighted"; that is, the five commodities that we have used have affected the total index number in proportion to their *prices per unit*, and not in proportion to their relative importance in the total volume of the country's trade. But some items enter much more extensively into trade than others, and the large sales of such goods entitle them to special consideration in the construction of indexes. Consequently, it is now the custom to "weight" index numbers, multiplying the price of each commodity by a number indicating its relative importance in total

TABLE 39. CONSTRUCTION OF UNWEIGHTED INDEX NUMBERS

The aggregate of the 1926 wholesale prices of five commodities being used as a base, the "relatives" (or percentages) for 1920 and 1947 are computed by dividing the aggregates of the latter years by the aggregate of the base year, and multiplying by 100. The results are the unweighted index numbers for those years. The method is called the "relative of aggregates."

Commodities	Prices per Unit		
	1926	1920	1947
Butter (per pound).....	.40	.67	.68
Eggs (per dozen).....	.30	.48	.54
Coffee (per pound).....	.58	.15	.24
Lead (per pound).....	.08	.09	.15
Cotton (per pound).....	.19	.40	.38
Aggregate Prices.....	\$1.55	\$1.79	\$1.99
Unweighted Indexes.....	100	115	128

trade, so that the part played by each item in influencing the final index number is determined by the quantity of that commodity that is bought and sold.

If we assume that the sales of butter, eggs, coffee, lead, and cotton amount to 20,000, 30,000, 10,000, 5,000, and 20,000 units, respectively, we may compute *weighted* index numbers which reflect more accurately than *unweighted* indexes the changes that have taken place in general purchasing power. These revised index numbers, as is shown in Table 40, are 100 for 1926, 140 for 1920, and 150 for 1947.

There are many series of price indexes in this country that have been constructed with care and are being kept up to date. The late Professor Irving Fisher, of Yale University, used to publish a weekly *commodity* index based on 120 items. Carl Snyder for many years published a *general* index in which were included not only wholesale and retail commodities but many other items. The United States Bureau of Labor Statistics com-

puts a *cost of living* index, month by month. One of the best indexes of *wholesale commodity prices* is published by the Bureau of Labor Statistics.

Snyder's General Price Index. As we have noted, Carl Snyder's index of general prices included a wide variety of items. It was, indeed, an *index of indexes*, for Dr. Snyder computed his index numbers from twelve separate indexes compiled by government bureaus, the Federal Reserve Bank of New York, and several other agencies. The twelve types of prices that went into the making of this general index were security prices, composite wages, retail food prices, prices of equipment and machinery, farm prices at the farm, automobile prices, wholesale hardware prices, rents, realty values, other cost of living items, transportation costs, and industrial commodity prices at wholesale. Because it included a wider

TABLE 40. CONSTRUCTION OF WEIGHTED INDEX NUMBERS

The individual prices are multiplied by the quantities sold. An aggregate of these total prices is found for each year, and the index numbers are arrived at by dividing each of these aggregates by the aggregate for the base year, and multiplying by 100. The results are weighted index numbers.

Commodities	Units Sold Annually	1926		1920		1947	
		Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
Butter (per pound)	20,000	.40	\$ 8,000	.67	\$13,400	.68	\$13,600
Eggs (per dozen)	30,000	.30	9,000	.48	14,400	.54	16,200
Coffee (per pound)	10,000	.58	5,800	.15	1,500	.24	2,400
Lead (per pound)	5,000	.08	400	.09	450	.15	750
Cotton (per pound)	20,000	.19	3,800	.40	8,000	.38	7,600
Aggregate Prices			\$27,000		\$37,750		\$40,550
Weighted Indexes			100		140		150

variety of items than any other index of prices, this general price index has often been used for calculating the purchasing power of money, but only up to and including the year 1939, for this index was discontinued in 1940.

Wholesale Commodity Price Index of the Bureau of Labor Statistics. We must take time, however, to describe briefly the index of wholesale commodity prices to which we referred above. For many years the Bureau of Labor Statistics has compiled, month by month, an index of commodity prices, which is of importance not only because it is constructed with great care from a great many commodity prices, but also because it is cited so often in current newspaper and magazine articles. Probably no other index of prices is so widely used. It is now made up of the wholesale prices of more than 800 commodities; and these commodities include farm products, foods, hides and leather products, textiles, fuel and light-

ing, metal and metal products, building materials, chemicals and drugs, house furnishings, and miscellaneous goods. The base year of the index has been changed from time to time as the Bureau has deemed desirable. At present, 1926 is the year on which the index is based.

The number of items entering into an index is not a matter of hard and fast rule. Some indexes include many items and others relatively few, but the exact number appears to be much less important than the exercise of care in choosing representative samples. Professor Fisher, who wrote widely on the subject, felt that an index which did not include more than 20 items was seldom of much value. He regarded 50 items as a much more satisfactory number. "After 50," he said, "the improvement obtained from increasing the number of commodities is gradual and it is doubtful if the gain from increasing the number beyond 200 is ordinarily worth the extra trouble and expense."²

The index of the Bureau of Labor Statistics goes back as far as 1890, but the figures for years prior to 1926 are based on fewer commodities than are the figures since 1926; however, to quote an official statement of the Bureau, "they may be considered comparable for all practical purposes." This index, like that illustrated in Table 40, represents a "relative of aggregates"; moreover, all of the items that have been used, unlike those of Table 39, have been carefully weighted by multiplying individual prices by the quantities sold.

Cost of Living Index. The cost of living index of the Bureau of Labor Statistics is based upon the prices of commodities and services purchased by wage earners and lower-salaried workers in thirty-four large cities of the United States. The prices of food, rent, clothing, house furnishings, fuel, light, and miscellaneous items go into the making of this index. It is, therefore, the best index we have of the prices of the kinds of goods for which most of the money income of most of the people of the United States is currently spent. The base used is the average prices of these goods during the five-year period 1935 to 1939, inclusive. This cost of living index has been computed for all years as far back as 1913. In several of our illustrations we shall treat this index as though it included *all* prices, and as if it were therefore an index of *general prices* or the *price level*.

The Cost of Living and Purchasing Power. In Table 41 are given the index numbers of the cost of living (or price level), of the purchasing power of the dollar, and of wholesale commodity prices, for the years 1913 to 1947, inclusive. A comparison of Columns 1 and 2 shows that when the cost of living index is high the index of purchasing power is low, and vice versa. This is necessarily the case, since the index of purchasing power is obtained by dividing the price index of the base year (in the

² Irving Fisher, *The Making of Index Numbers*, Boston, Houghton Mifflin Company, 1922, p. 340.

TABLE 41. INDEXES OF COST OF LIVING, PURCHASING POWER OF THE DOLLAR, AND WHOLESALE COMMODITY PRICES, 1913 TO 1947^a

(Source: United States Bureau of Labor Statistics)

Year	Cost of Living Index	Index of Purchasing Power	Wholesale Commodity Index
1913	70.7	141.4	70
1914	71.8	139.3	68
1915	72.5	137.9	69
1916	77.9	128.4	85
1917	91.6	109.2	117
1918	107.5	93.0	131
1919	124.5	80.3	139
1920	143.2	69.8	154
1921	127.7	78.3	98
1922	119.7	83.6	97
1923	121.9	82.0	101
1924	122.2	81.8	98
1925	125.4	79.7	103
1926	126.4	79.1	100
1927	124.0	80.6	95
1928	122.6	81.6	98
1929	122.5	81.6	96
1930	119.4	83.8	86
1931	108.7	92.0	73
1932	97.6	102.5	65
1933	92.4	108.2	66
1934	95.7	104.5	75
1935	98.1	101.9	80
1936	99.1	100.9	81
1937	102.7	97.4	86
1938	100.8	99.2	79
1939	99.4	100.6	77
1940	100.2	99.8	79
1941	105.2	95.1	87
1942	116.5	85.8	99
1943	123.6	80.9	103
1944	125.5	79.7	104
1945	128.4	77.9	106
1946	139.3	71.8	121
1947 (Mar.)	156.3	64.0	150

^a Base for cost of living and purchasing power indexes, 1935-39 average; for wholesale commodity index, 1926.

present instance, the *average* for 1935-39, which happens to be approximately the same as for the year 1940) by that of another year, and multiplying by 100. We see, then, that a United States dollar in 1913 bought 141 per cent as much as in 1940; but in March, 1947, it bought only 64 per cent as much as in 1940. Therefore, the purchasing power of the dollar was great in 1913, but small in 1940; and the price level was low (71) in 1913, and high (156) in March, 1947.

Curves of Index Numbers. The cost of living index and the index of purchasing power for each of these thirty-five years are plotted in Fig. 41, so that the changes from year to year may be noted readily.

The horizontal line opposite the index number 100 shows the kind of price "curve" we would have had, had there been no changes in prices during the period in question. The curve indicating the price level that actually prevailed in these years shows that from 1913 to 1916 prices were fairly stable; that there was a sharp advance from 1916 to 1920, then a sudden fall to 1922; that from 1923 to 1930 prices were again fairly stable, though on a much higher level than between 1913 and 1916; and that after 1930 there was a steady decline to 1933, followed by a slight upturn in 1934 which continued to 1937 but declined for two years thereafter, only to rise sharply from 1940 to 1947 in response to the stimulus of World War II and the shortages of goods in the post-war period. The peak of prices was reached in 1947, with the price level even higher than in 1920, a year in which prices were twice as high as before World War I—so high, indeed, that the purchasing power of the dollar was only 45 per cent as great in March, 1947, as in 1913.

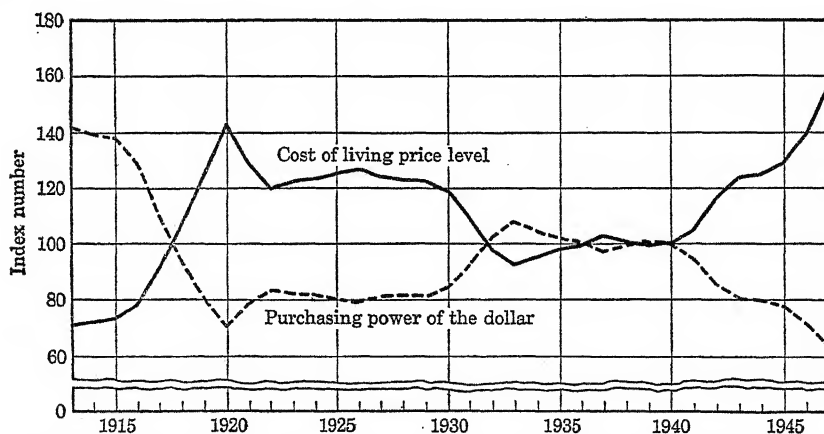


FIG. 41. COST OF LIVING AND PURCHASING POWER OF THE DOLLAR, 1913-1947
(See Table 41)

Changes in the Value of Money. We have noted that the index of purchasing power of the dollar varies inversely with the general price index. Whenever the latter is higher than 100, the former is below 100. This fact is shown graphically in Fig. 41. Every advance in the price index indicates a decline in the value of money, and vice versa. In 1947, for example, when the cost of living index was 156, the index of purchasing power was 64. This means that the value of the dollar was approximately two-thirds as great in 1947 as in 1940. The index of purchasing power, then, is also an index of the value of money.

POSSIBLE CAUSES OF CHANGES IN PRICE LEVELS

Our reference to money in the preceding paragraph suggests that money may have something to do with changes in price levels. This relationship between money and general prices is set forth in the Quantity Theory of Money. The theory states that general prices tend to vary directly with the quantity of money—or, as some quantity theorists say, with the quantity of money and credit—in circulation. This means that if the quantity of money is increased, other things remaining unchanged, the price level will rise; and if the quantity of money is decreased, other things remaining unchanged, the price level will decline.

The Equation of Exchange. The “other things” to which we have referred are (1) the velocity of circulation of money, and (2) the volume of trade. The velocity of circulation refers to the “rate of turnover” of money, or the number of times that it is used in a given period. We saw in an earlier chapter that money may have a turnover of twenty-five or thirty times a year; that is, the same dollar may be used in twenty-five or thirty purchases in a twelve-month period. The volume of trade relates to the total number of exchanges that take place in a given time; of course, an exchange is made every time a thing is bought or sold. With these facts in mind, we may set down a formula, which is known as the “equation of exchange,” from which we shall exclude “credit” for the present, but include it later. We assume for the moment, then, that all goods are paid for with money. The equation of exchange, under these simple conditions, would be stated thus: $P = \frac{MV}{T}$. In this formula, P

relates to the price level, M to the quantity of money, V to the velocity of circulation (or turnover) of money, and T to the volume of trade, or total number of exchanges. We have already noted that money is desired ordinarily not for its own sake, but almost exclusively because of its usefulness in buying economic goods. This being the case, it is probable that all of the goods that are offered for sale will exchange for all of the money that is available, since purchasers, in their desire to secure goods, will bid higher and yet higher prices for the goods they wish, until the limited quantity of money prevents further bids.

Our equation of exchange is merely a convenient way of expressing this fact, and what it says in effect is that, for a given period of time, prices in general are determined by the relationship between MV and T. It will be apparent, therefore, that any change in M or V, without a corresponding change in T, will cause a change in P. If, for example, the quantity of money (M) should increase, the other factors remaining constant, the price level will rise. An increase in the velocity of circulation (V), without change in the other factors, will have a similar effect. And if the volume of trade (T) should increase, without a corresponding

change in either the quantity of money or the velocity of circulation (or both), the price level will experience a decline. It is evident, then, that there is a relationship among these three factors, and that a change in any one, without some offsetting change in either one or both of the others, is bound to affect the price level. As Professor Cassel puts it, "The existing quantity of money must involve a definite performance of payments, to which the level of prices is obliged to adjust itself."³

Examples of the Equation of Exchange. The possible effects upon the price level of changes in the quantity of money in circulation, the velocity of circulation, or the volume of trade, may be illustrated by several examples. Let us assume, in order to make our conditions very simple, that the total amount of money in circulation is \$5000; the velocity of circulation is 30; and the total trade is 150,000 "goods units," every goods unit being exactly like every other, and each consisting of $1/150,000$ of the total quantity of every kind of economic goods entering into trade during the period under consideration.⁴ Under these conditions, the price of a goods unit may be ascertained by recourse to our formula. Substituting the known quantities for M, V, and T, we have the following equation:

$$P = \frac{\$5000 \times 30}{150,000}$$
 The price of a goods unit, therefore, is \$1.00. Since a goods unit represents all kinds of goods, we may say that a unit of *goods in general* sells at this time for \$1.00; and by giving to this amount an index number of 100, we may compare prices at other times with prices at this time, provided we have specific figures to substitute for the symbols in the equation of exchange.

If we suppose, by way of illustration, that a year later the quantity of money was twice as great as in the above example, but that there had been no change in V or T, a simple calculation will show that the price of a goods unit would be \$2.00, and the index number 200; and if the quantity of money were to fall to \$2500, with no change taking place in the other factors, the price would necessarily drop to 50 cents, and the index number to 50.

If M and T were to remain constant at \$5000 and 150,000, respectively, while V (the velocity of circulation of money) changed from 30 to 15, we should again have a goods unit selling at 50 cents, and the index number of general prices would be 50. If M and V should remain con-

³ Gustav Cassel, *The Theory of Social Economy*, New York, Harcourt, Brace & Company, Inc., rev. ed., 1924, p. 426.

⁴ The assumption involves the supposed division of the whole of every kind of economic goods that is sold (both commodities and services) into 150,000 equal parts, and the combination of one fractional part of each of these items into a single unit, which we are calling a goods unit. Each goods unit would then consist of $1/150,000$ of the total volume of trade, and would therefore represent not only all items but also the proportion to which every item entered into trade. Readers who are familiar with Professor Fisher's "goods dollar" or "commodity dollar" will note here a family resemblance to that well-known concept.

stant, while T increased to (say) 300,000 units, then once more the price per goods unit would be 50 cents, and the index number of general prices would be 50.

These simple calculations demonstrate that a change in P may be the result of a change in M, V, or T, or a combination of changes in these three factors of the equation. Because we assumed that the *total volume of trade* consisted of goods units, there can be no question that the prices about which we have been talking are *general prices*, or *price levels*. Since we took as a base the period in which a goods unit sold at \$1.00, we were justified in placing the index number for that period at 100; and from this point it would follow logically that the index for the second period (with a goods unit selling at \$2.00) would be 200, and the indexes for the remaining three periods must be 50.

"Credit" in the Equation of Exchange. It is now necessary to make a modification in our equation of exchange as it has been described, since prices are affected not only by the quantity of *money* available for the purchase of goods, but by the quantity of *credit* as well. Indeed, credit plays a much greater part than money in influencing the price level, since the quantity of deposit currency available for the purchase of economic goods of various kinds is many times as great as the quantity of money actually in circulation. The general nature of the equation, however, remains unchanged. All that needs to be done is to insert two new factors, M' for credit, and V' for the velocity of turnover of credit. The formula, as revised, is as follows: $P = \frac{MV + M'V'}{T}$. If all the factors of this equation

except P are known, this unknown factor (representing the price level) may be ascertained just as readily as in the simpler form of the equation.

The Quantity Theory of Money. It is obvious, therefore, that the changes in the price level are brought about through changes in one or more of these several factors. Unfortunately, it is not possible to say with great exactness to what extent these factors do change from time to time. It is the contention of a group known as the "quantity theorists" that the important changes in price levels result from changes in M and M', which are usually grouped together under the title, "circulating media." It will be recalled that there is a relationship, though not a very exact one, between money and credit, since credit, which exists chiefly in the form of deposit currency, is based upon money in the form of bank reserves; so that, within certain rather wide limits, the quantity of credit is fixed by the quantity of money.

The quantity theorists believe that changes in the velocity of circulation are not of sufficient importance to affect the price level greatly; that is to say, they are of the opinion that fluctuations in the velocity of circulation do not prevent the dollar from being employed just about as many times in one year as in another, over long periods of time. Though

they admit that the total volume of trade changes somewhat from time to time, they argue that fluctuations in T would not account for the great changes in price levels that have sometimes taken place. As for M and M' (money and credit), there can be no doubt that these items have fluctuated very greatly at times. The fact that their increases and decreases coincide rather closely with increases and decreases, respectively, in price levels, seems to indicate that the quantity theorists may have some justification for believing that money and credit are by all odds the most significant factors in bringing about these fluctuations in general prices.

Historical Verification of the Quantity Theory. An examination of conditions that existed between 1913 and 1920, a period during which general prices in the United States almost doubled, tends to corroborate the theory that money and credit are the most important influences in effecting changes in price levels. Table 40 shows that the general price index rose from 58 in 1913 to 113 in 1920. If the total volume of trade had been smaller in 1920 than in 1913, part, at least, of this increase in general prices might be attributable to T . But, as a matter of fact, production and exchange actually increased in the period under discussion. Almost nothing can be said with assurance about V and V' during these seven years, but it seems probable that they were not responsible to any appreciable extent for the tremendous increase in general prices.

When we examine M and M' , however, we discover increases in the quantities of these factors which suggest very strongly that the high price level of 1920 may properly be charged up to them. The concrete facts about money and credit in the period under discussion are these: In 1913 the total amount of money in the United States was less than \$4,000,000,000, but by 1920 it was more than \$8,000,000,000. The amount of *increase*, to be exact, was 116 per cent. This increase was due largely to shipments of gold from Europe to the United States. Credit in the form of bank deposits experienced an increase of 152 per cent from 1913 to 1920, jumping from less than \$9,000,000,000 to approximately \$22,000,000,000. Another increase in M' resulted from an extension of credit due to the rediscounting of commercial paper, and to a large volume of loans made on government bonds by the Federal Reserve banks. Finally, some \$16,000,000,000 worth of war bonds had been issued up to 1920, and these in many cases circulated almost as freely as money, thus increasing greatly the total quantity of circulating media.

With these facts before us, it is not difficult to believe that M and M' were largely responsible for the extremely high price level of 1920, as compared with the level of 1913. Another evidence of the influence of M and M' upon price levels is to be found in the gradual increase in general prices from 1900 to 1913. During this period the index number

rose from 44 to 58, 1926 being used as the base year; and during this same period there was a steady increase in both money and credit, resulting from the increased production of gold which had its beginning in the latter years of the nineteenth century. Finally, an examination of money and bank deposits for 1929 and 1933 shows an *increase* of about a half billion dollars in the quantity of money during this period, but a *decrease* of eight billions in the volume of demand deposits. This substantial net decrease in total circulating media in the United States was accompanied by a decline in the price level from 105 to 75. To quantity theorists the concurrent decline in the price level and the volume of circulating media appears to suggest a causal relationship between the two, and to provide further confirmation of the soundness of the quantity theory of money.

However, what we have said about high general prices going hand in hand with a large total volume of circulating media, and low general prices with a small total volume of circulating media, must not be thought to constitute conclusive proof that the volume of money and credit is the *cause*, and the price level, high or low, the *effect*. Indeed, there are a good many economists of high standing who believe that the opposite is true, and that changes in the total volume of circulating media may be the result of changes in general prices—that it is changes in P that lead to changes in M and M' , and not the reverse. But it is safe to say that there are few, if any, who would deny that the general level of prices, P , is affected by changes in M and M' , provided all other factors in the equation of exchange remain fixed.⁵

EFFECTS OF FLUCTUATIONS IN PRICE LEVELS

We may now examine briefly some of the results of changes in general prices. It should be remembered, first of all, that, barring transitional effects, it matters little whether prices are high or low. The equation of exchange shows that all goods entering into trade will exchange for all the money and credit in circulation. If, therefore, the quantity of circulating media of one period were double that of another period, with trade and velocity of circulation remaining unchanged, the price level would be just twice as high as it had been. Doubling the amount of circulating media, then, means a doubling of general prices, if V , V' , and T have not been affected; and it means also that a given standard of living now costs approximately \$6000 instead of \$3000, or \$20,000 instead of \$10,000.

But if this new price level should remain unchanged for a considerable length of time, wages and other forms of payment would also tend to be twice as high as they had been. We would then give twice as many dol-

⁵ Later in the chapter we shall note the concern that was caused by the enormous volume of liquid assets (some 225 billion dollars' worth, as of February, 1946) that accumulated in the active and post-war periods of World War II.

lars (or "counters") for a given amount of goods as were required to make the purchase prior to the increase in general prices; but no hardship would ensue, since wages and salaries would also consist of twice as many dollars (or counters) as had been received before the rise in prices took place. We see, then, that it is the *transitional effects*—the results of sudden and extensive price fluctuations—that cause the trouble that is experienced on account of changes in price levels. High prices and low prices are equally harmless, if only one or the other, once adopted, will "stay put." But changes in price levels may result in genuine hardship for some and unearned gains for others.

The Hazards of Long-Time Credit. These gains and losses are likely to occur whenever there is an extension of credit over a period of years during which changes in the price level occur. In lending or borrowing money, it is really purchasing power which is loaned or borrowed. If a business man had borrowed \$1000 in 1940 and repaid the loan in 1947, the amount of purchasing power returned to the creditor would have been 64 per cent of the amount received in 1940, and the creditor would have been the loser by \$360. If, on the other hand, this loan had been made in 1920 and returned in 1928, the borrower would have returned to the creditor \$1169 in purchasing power, instead of the original \$1000 borrowed, because of the decline in general prices. And if he had waited until 1933 to return the loan, he would have paid back \$1000 in money but more than one and one-half times as much purchasing power as he borrowed, since the \$1000 in 1933 would have bought about as much economic goods as \$1550 in 1920.

These simple illustrations show that debtors gain by paying their obligations when prices are high, and lose by paying when prices are low. Business men are borrowing all the time, sometimes to meet current expenses and again for the purpose of making additions to equipment. Changes in price levels may have serious consequences to such individuals if they happen to borrow when prices are high in order to make improvements, for, as we have seen above, they may have to repay the loans when prices are low, and this means that they must pay back more purchasing power than they received. Hence, creditors gain by reason of declines in the price level, *provided the fall in prices does not make it impossible for the debtors to make payment*. This proviso is important, for sudden and great fluctuations in price levels may make it impossible for debtors to meet their obligations, and force them into bankruptcy. In such event the creditors are, of course, far worse off than though the price level had remained unchanged, or had even risen so as to make the repayment of loans easy, in the manner described in the preceding paragraph.

The Problem of Fixed Money Income. Sharp rises in price levels also have serious effects upon persons living on incomes from fixed money

obligations. We may take the example of a retired business man living in 1913 on an annuity of \$6000. With prices as they were at that time, he could live quite comfortably on this amount. But in 1920 those same \$6000 would buy only as much economic goods as he could have secured in 1913 for \$2961, and his standard of living, of necessity, would have dropped accordingly. However, if he was still alive in 1933, he found that much of his lost purchasing power had come back. For his \$6000 in 1933 had 55 per cent more purchasing power than in 1920, since the index of purchasing power for 1933 was 108, as against 70 for the earlier year. This illustration could be extended to include all persons living on annuities, pensions, insurance benefits, or interest from bonds; all institutions (such as colleges) operating largely on endowments; and, to a somewhat lesser degree, salaried workers as contrasted with wage earners.

The Plight of the Salaried Worker. The term "salaried worker" refers here to types of wage earners whose incomes are on an annual or monthly, and not upon a weekly basis. This classification includes, of course, teachers, preachers, government employees, office workers, and a host of others. The important fact about the incomes of these persons is that, while salaries may change somewhat to meet changes in price levels, they almost invariably change very slowly. There is, for example, the case of the college teacher who in 1940 was receiving a salary of \$3000. This was a modest income, but with strict economy he was able to make ends meet. By 1947 his salary had increased to \$3500; but because of the increased prices that then prevailed he could buy with the larger salary only as much as \$2240 would have bought him in 1940. This is a typical example of the difficulties in which salaried workers find themselves in a period of rapidly increasing prices.

The Case of the Wage Earner. Skilled artisans and common laborers are usually referred to as "wage earners," in order to distinguish them from salaried workers. The wage earner is often, though not always, paid on a weekly basis, and the income he receives is the result of frequent bargainings. In many instances, wage earners belong to trade unions, and wage agreements are drawn up by officials of the unions every year or two, or as often as every six months. As a consequence of these frequent bargainings over wages (which take place with unorganized workers also), the earnings of the wage earners are more likely to keep pace with rising prices than are the earnings of salaried employees. Nevertheless, it is a fact, as may be seen by an examination of statistics, that increases in wages usually lag behind rises in prices. A wage agreement continues in effect, let us say, for six months; but during the six-month period prices may increase materially, and thus cause the wage earner to lose out to some extent so far as purchasing power is concerned. The

point is expressed in the well-known saying, "Prices take the elevator, while wages climb the stairs."

It should be noted, however, that the money incomes of certain classes of wage earners may at times rise faster than the cost of living in periods of rising price levels. Government figures show that the cost of living in the United States as a whole rose only 7 per cent between August, 1939, and June, 1941, but the average weekly earnings of workers in ninety *manufacturing industries* increased 30 per cent in this period. These larger money wages are accounted for by greater regularity of employment, an increase in the length of the working week, by some workers "moving up from lower to higher paying positions as the defense industries called for increasing numbers of skilled and semi-skilled workers," and by some increases in *wage rates* due to the greatly increased demand for labor in essential defense industries.⁶ We see, therefore, that—in many cases at least—these larger earnings do not represent increased incomes *for the same amount and the same grade of work*. Moreover, the gains in real wages that come to some wage earners at the beginning of a period of rising prices may vanish fairly promptly, and even those who are thus specially favored are likely to lose out in the long run through the failure of their money wages even to keep pace with the mounting cost of living.

The Effects of Falling Prices. Our attention has been centered chiefly upon the results of *rising* prices, because increases in prices have particularly serious effects upon persons of relatively small incomes. When prices fall, the effects are the reverse, of course. Purchasing power, which has shrunk during the upward course of prices, expands again when prices are on the downward trend. It might be supposed that a balance would be reached in this way, but, so far as a given individual is concerned, there is no assurance that he will regain through falling prices anything like as much as he has lost through a rise in the price level. And it should be observed that, though salaried employees and wage earners ordinarily gain in times of falling prices *if they hold their jobs*, the fact is that unemployment is often painfully extensive at such times, as was shown during the period of declining prices and *increasing unemployment* in the post-1929 depression.

Business men who have goods to sell are usually gainers through advances in the price level, since their costs of production ordinarily do not increase so fast as the selling price of the finished product increases. As a consequence, business men sometimes welcome rising prices, since they feel that the gains made on the upgrade will be greater than the losses which are incurred when prices again decline. This is a matter which we shall touch upon again in the next chapter.

⁶ Cf. Meyer Jacobstein and Harold G. Moulton, *Effects of the Defense Program on Prices, Wages, and Profits*, Washington, Brookings Institution, 1941.

PROPOSED SOLUTIONS OF THE PROBLEM
OF PRICE LEVEL CHANGES

Because of the disadvantages of changes in price levels, such as those which we have outlined, attempts have been made to discover a remedy for what many consider a serious economic disorder. In general, the proposals have been of two kinds. First, plans have been suggested for lessening the evil effects of price level changes without eliminating the changes in price levels themselves; and, second, there have been proposals for stabilizing prices through the control of the circulating media (M and M').

The "Market-Basket Plan." One of the most interesting suggestions for avoiding the harmful effects of price changes is known as the "market-basket plan." The Philadelphia Rapid Transit Company used this plan for more than a decade to guarantee its employees a stable standard of living; but it was abandoned when this corporation was reorganized as the Philadelphia Transportation Company. The plan was designed to keep wages and prices always on the same level. Since the price level could not be controlled by the Philadelphia Rapid Transit Company, this company did what appeared to be the next best thing; namely, it increased wages as the price level rose, and decreased wages as the price level fell.

The market-basket plan used an index number based on 184 articles which were in sufficiently "general use to influence accurately the changes in the purchasing power of the employee's dollar." Among these items were "rent, shirts, stockings, nut coal, kerosene, brooms, sewing machines, pork chops, gas, tobacco, quinine pills and haircuts." From time to time the articles used in making the index number were priced in the stores and markets patronized by P.R.T. employees. If, at the close of the year, prices were found to have varied as much as 5 per cent, the basic wage was changed to meet this variation. It was contemplated, therefore, that changes in wages would ordinarily be made only once a year; but a variation of 10 per cent or more for a period of three months was met by a corresponding change in money wages.

The purpose of the plan, as stated by the company, was "to assure to the employee and his family their present standard of living, in bad times as well as in good." This did not mean that P.R.T. employees had no opportunity to improve their standard of living. Wages could still be increased, as before, by convincing the management that higher wages should be paid. The P.R.T. market-basket plan simply assured the employee that his standard of living would not be affected by such a force as fluctuating prices, which were wholly beyond his control.

There would seem to be at least two possibilities of serious trouble in operating a plan of this kind. If prices, and consequently wages, took a

pronounced drop (say, to the extent of 20 per cent), it would probably be difficult to convince the employees that they were not being imposed upon. For the average worker finds it hard to understand that \$32 a week with a low price level means as much purchasing power as \$40 a week when the price level is higher. And if prices rose greatly (say, to double their base level), though the employee would surely not object to receiving \$80 a week in place of the usual \$40, it would probably be difficult for the company to secure sufficient revenue to enable it to advance wages to this extent.

Difficulties such as these were foreseen by the Philadelphia Rapid Transit Company when the plan was inaugurated, but the obstacle which finally emerged was of a somewhat different type. The decline in general prices which followed 1929 was accompanied by several P.R.T. wage cuts, based on their curve of falling prices. But in June, 1932, it was necessary (because of greatly reduced revenue resulting from the depression) to cut wages slightly below the point indicated by the price curve. In the face of this emergency, the market-basket plan was suspended temporarily. One year later, when both revenue and general prices had increased, the plan again went into active operation, with a rise in wages which brought the purchasing power of P.R.T. employees once more up to the level of predepression days, and continued to function until the company was reorganized.

Multiple Standard of Deferred Payments. A second plan for avoiding evil effects of price changes, which we shall not be able to examine in detail, relates to long-term credits. It is called the Multiple or Tabular Standard of Deferred Payments, and is similar in general principles to the P.R.T. plan. The idea is that debtors, in meeting their obligations, should pay to creditors not the number of dollars, but the quantity of purchasing power, that they have borrowed. If, under this plan, \$1000 were borrowed in 1940 and repaid in 1947, the payment would consist not of a mere \$1000 (which would buy in 1947 only as much goods as \$640 would have bought in 1940), but \$1563 (which in 1947 would buy as much goods as \$1000, the amount of money borrowed, would have bought in 1940).

Without going further into plans of this kind, it may be said that there would be numerous difficulties in the actual working out of such plans as we have reviewed. We have noted several of these difficulties. Still another is that of finding a thoroughly acceptable index for measuring price changes. It would appear that arrangements such as these are scarcely feasible so long as they are adopted by only a few persons or organizations.

The "Stabilized Dollar." Another attempt to solve the problem of changing prices is to stabilize prices through the control of the circulating media. One of the best-known plans of this type is usually referred to as the "stabilized dollar" or "compensated gold dollar," and has been associated with the name of the late Professor Irving Fisher.

We can give here only the barest outline of the plan. We have seen that a rise in prices means a fall in the value of gold, and vice versa. Professor Fisher wanted a dollar which would always buy the same amount of goods, and he proposed to get it by increasing or decreasing the amount of gold in the dollar as prices showed a tendency to rise or fall.

The plan includes:

1. A monthly index number.
2. The removal of all gold from circulation, and the use of circulating media consisting only of gold certificates.
3. A variation in the amount of gold that a "gold certificate" will command at the mint, this variation corresponding to general price changes.

We may see how the plan would presumably work, by assuming that all money in circulation is represented by one dollar, and that the index number is 100. Now let us suppose that the index number rises to 110. This means, of course, that sellers of goods are no longer willing to exchange their products for the amount of gold contained in a dollar, but demand the amount of gold contained in \$1.10. Since gold is thus actually less valuable than it has been, a gold certificate called a "dollar" should command more actual gold than it formerly did. Professor Fisher's plan would make this literally true; the gold certificate presented at the mint when the index number is 110 would *in fact* command 10 per cent more gold than it commanded when the index number was 100.

And now, since the gold certificate does exchange at the mint for the amount of gold demanded by sellers for their goods, namely, 110 per cent of the former amount, it will readily exchange for the same amount of goods as before the rise in the index number took place; for sellers are now getting in each gold certificate the amount of gold that they are demanding. In this way prices would forever remain unchanged, as expressed in gold certificates; or, more correctly, prices would always tend to fluctuate narrowly about the index number of 100.

Stability Through Credit Control. Until comparatively recent years, it was confidently believed by many persons that the Federal Reserve Banks and the Board of Governors of the System could halt the overexpansion of credit, and even do something by way of bringing about a contraction of credit, if such "interference" should be deemed necessary. The nature of the machinery of control over credit was described in Chapters 33 and 34.

In Chapter 34 we noted that the Board of Governors seemed to have control powers which would enable it to prevent the overexpansion of credit *in any ordinary situation*. But the situation it faced at the close of World War II was anything but ordinary. The financing of that war, as has already been explained, flooded the country with so much money and credit that the Board was powerless to prevent the serious inflation

which threatened if our wartime controls over *individual prices* (which were imposed shortly after our entrance into the war) were allowed to expire with the termination of the O.P.A. law authorizing them, as many of our business men recommended. We shall examine this agency of price control briefly in the concluding section of the present chapter.

Price Control vs. Price Freedom. Whatever devices may be used to control credit, and wherever the power to create credit may reside, the fact remains that it would be an almost superhuman task to determine the precise moment at which credit control should be exercised. For this reason some persons feel that disturbances created by the free functioning of an automatic price system are preferable to possible consequences of attempted control of the price level by political agencies. Past experience has shown that such attempts have sometimes aggravated existing difficulties, instead of alleviating them. On the other hand, to abandon all hope of exercising conscious control over economic phenomena is to adopt an unnecessarily fatalistic attitude. We cannot undertake here to compare the relative merits of economic planning and economic automaticity, but it is clear that this broad issue is involved in any comprehensive proposal to stabilize the price level by interfering with its free and "natural" movement.

WARTIME AND POST-WAR PRICE CONTROL

The serious inflation which accompanied World War I enriched some persons while impoverishing others, and increased the cost of that war by about 150 per cent. It was doubtless the recollection of this "by-product" of World War I that led the United States government, even before the attack upon Pearl Harbor, to adopt measures designed to prevent a disastrous rise in prices from taking place during World War II.

The Dangers of Too Much Money. Our study of price fluctuations has shown that a substantial increase in the quantity of circulating media without a corresponding increase in the quantity of goods (the velocity of turnover of money and credit being neglected in the interests of simplification) inevitably raises the price level. The situation faced in World War II was a very great increase in the quantity of money and credit, and a serious decrease (instead of increase) in the quantity of goods available for civilian purchase. Total production in the United States increased enormously during the war, but the current output of goods consisted largely of things which either were not wanted or could not be obtained by civilians. Under these circumstances, the buying public, with an unusually large number of dollars at its disposal, tended to bid excessively high prices for the limited quantity of goods offered for sale. The natural result, unless interfered with, would have been a rapid rise in the general price level.

Relieving the Public of Excess Money. During World War II, the government took measures to relieve the consumers of the excess money which could do them no good and might do much harm. Taxation was one of these measures; and in each of the wartime years many billions of dollars in taxes were collected from Americans. The sale of bonds, which also took from people money which (with a shortage of consumers' goods) they could not spend to advantage, brought in additional billions of dollars, year by year. Further billions were set aside (that is to say, not used in buying goods) through private savings of other kinds. But even after the public had surrendered portions of its money income in the ways we have mentioned, there remained in its possession larger amounts than were sufficient to buy the available civilian goods at stable prices; and this excess, which is usually called the "inflationary gap," tended to cause trouble by raising the price level. The need for price control, in the form of "price ceilings," was recognized in the early days of the war, and led to the passage of the Emergency Price Control Act, which became law in January, 1942.

The Nature of Price Ceilings. Stated briefly, this law provided that the prices of virtually all commodities and a great many services be "frozen" as of March, 1942. Foods of most kinds, clothing, fuel, furniture and furnishings, hardware and agricultural supplies, rents, and many other types of goods (both material and non-material) were included in the thousands of articles covered by price ceilings. In the case of "cost of living" items, which comprised important articles in the budgets of families in the low- and middle-income groups, the maximum prices had to be publicly posted by the seller for the protection of the buyer. Additional powers of control over individual prices were granted under the Anti-Inflation Act of 1942 and a number of Executive Orders issued by the President.

We cannot take space here to deal with the countless problems which arose in connection with attempting to administer price-ceiling control on so extensive a scale. There were difficulties, in some cases, of determining what the maximum prices should be. There were instances of unintentional violation of the law. There were deliberate violations by selling in the black market at higher than ceiling prices, and by reducing the quality of a given good while maintaining the old maximum price of a better article. There was, in 1942, the necessity of freezing wages, for it became clear that it was grossly unfair to stabilize the selling price of a good while the cost of production was rising by reason of wage increases. There were instances in which it was necessary to grant price increases or wage increases in given industries if they were to continue to function; and other instances in which sellers were required to hold to the maximum prices, but were granted governmental subsidies to enable them to stay in business.

The Success of Wartime Price Control. It is quite impossible, of course, to isolate the several elements which constituted our wartime price-control mechanism and to determine how well each element served its purpose. However, the clear fact is that the combined efforts of all of the controls that were employed brought surprisingly satisfactory results. The wholesale commodity price index number (1926=100) of the United States Bureau of Labor Statistics rose from 77 in 1939 to 106 in 1945, as against a World War I rise from 68 in 1914 to 154 in 1920—or a price rise of 29 points in World War II and 86 in World War I. Even more impressive was the showing made after 1942, the year that price control was adopted seriously; for the wholesale commodity index rose only 7 points from 1942 to 1945, when production, and hence the volume of purchasing power in the country, were making new high records.

An examination of the cost-of-living index (1935-39=100) shows a greater advance in prices. This index rose from 116 in May, 1942, when price control went into effect, to 133 in June, 1946, and it is probable (as has been charged by union leaders and others) that an accurate comparison of both quality and price would indicate a much larger increase. Nevertheless, on the evidence that is available, it may be said that the operation of price controls kept prices fairly well in hand during the years of actual combat in World War II and for several months after the fighting ended.

Post-War Price Controls. As was to be expected, the surrender of Germany and Japan brought demands from a number of industrialists and several strong business associations that price controls be abolished as of June 30, 1946, the date of expiration of the law under which the controls were authorized. It was urged that, with the war successfully concluded, it was high time to remove all restraints to production and to the right to set prices at whatever figures the traffic would bear. The typical argument of these opponents of price control was the one widely publicized by the National Association of Manufacturers.⁷ The gist of this argument, presented in the N.A.M.'s own words as it appeared in hundreds of full-page newspaper advertisements, was as follows:

"ISN'T THIS THE ANSWER? NAM has said: Remove price controls on manufactured goods and production will step up *fast*. In a survey of a representative cross section of NAM membership, 97% find price controls are hampering production. Remove these controls and goods will pour into the market. Within a reasonable time, prices will adjust themselves naturally—as they always do when production goes up—in line with the real worth of things. This is the way you can get the goods you want at prices you can afford to pay."⁸

⁷ The costliness of such a campaign is indicated by the fact that the N.A.M. stated, at one point, that it had spent \$400,000 in advertising its views on price control. It was later estimated by others that anti-O.P.A. advertising had cost the N.A.M. a total of not less than \$700,000.

⁸ *The New York Times*, April 19, 1946.

This question was answered with an emphatic "No" by a substantial number of business men, most professional economists who expressed an opinion, and an estimated 600,000 private individuals who wrote or telegraphed their Senators to support effective price control, after the House of Representatives had passed, early in 1946, a bill extending the life of price-control legislation for nine months but with amendments which rendered it practically powerless.

Described in economic terms, the situation in which the country found itself in the first half of 1946 was as follows:

1. There was an unprecedented shortage of goods of many kinds, goods which people had long wanted to buy, and which (in certain demonstrable cases) were being withheld from the market by sellers in anticipation of the removal of price controls on June 30, 1946.
2. There was also an unprecedented volume of liquid assets in the hands of individuals and business concerns, totaling some 226 billion dollars.⁹
3. In addition to these liquid assets already in existence, account had to be taken of the new money income that always accompanies new production, which in 1946 was being created at the rate of some 150 billion dollars a year.

The advocates of continued price control insisted that this was an economic setup which, in the absence of *direct* price controls such as those administered through the O.P.A., would almost necessarily give way to disastrous inflation; that inflation not only would work hardship on millions of families in the low- and middle-class income groups, but might lead to the prompt conversion of war bonds into cash, which would in turn be spent as promptly as possible to avoid further losses through later price spiraling; that union workers, seeing their real incomes whittled down by rising prices, would stage strike after strike for more pay; that the abnormally high profits accruing to business men in periods of rising prices would result in undue expansion of plant (which the Federal Reserve Board could not prevent, in view of the nature of the country's war financing); and that this feverish prosperity might give way to the greatest depression in our history, because it would follow the country's biggest business boom—the outcome, in turn, of the unrestrained spending of more money and credit than this country had ever before amassed.

Answering the specific question posed by the N.A.M. and its colleagues, the champions of the extension of price control urged that the O.P.A. should be continued, with its power to keep price ceilings on individual commodities and services until such controls could safely be removed—that is to say, until production had sufficiently caught up with demand,

⁹ *Federal Reserve Bulletin*, February, 1946, p. 123.

in the case of a given good, so that the ceiling could be removed without the price skyrocketing. They held that if, as the N.A.M. wished, price controls were removed *first*, the prices of goods would almost certainly leap forward so promptly and so far that production would have little chance of overtaking them. They argued that announcement that price controls would be retained as long as they were necessary would lead hoarders of goods to abandon their "sellers' strike" and throw their stocks of withheld goods upon the market. They expressed the belief, in general, that practically all ceilings could be safely removed within a year, but that the O.P.A. should not be obligated to remove the ceilings in the cases of those goods which, if released from control, were fairly certain to experience extensive rises in price.

The Desirability of Post-War Price Control. Freedom from economic restrictions, except such restraints as may be necessary to safeguard the public welfare, is one of the cardinal principles of a capitalistic system. This is particularly true of restrictions placed upon the price mechanism—a fundamental characteristic of capitalism, which, it will be remembered, is often called "the price system." Hence, it is our view that there is no place in our capitalistic economic society for price controls of the O.P.A. type in *normal* times. But the first six months of 1946 were so clearly abnormal that, among academic economists at least, it seemed extremely hazardous to abandon price ceilings and look to the "free market"—which had not yet been restored—to provide fair, safe prices. Nevertheless, the Congress modified the price control legislation so greatly that the President decided that it was unworkable, and in late 1946 removed all controls except those relating to rents and a very few commodities.

It is now evident that goods did not "pour into the market" with sufficient speed and in sufficient volume to prevent a rapid and substantial increase in general prices. By November, 1947, the cost of living index had reached the all time "high" of 164.9 (1935-39=100), and gave no signs of subsiding. The extent of the 1946-47 price rise and the subsequent development of considerable "buyer resistance" caused a good deal of anxiety even among those who had been most enthusiastic about the removal of O.P.A. controls, and who finally in some instances began to suspect that the soaring price level would indeed lead to depression, or at least to "recession."¹⁰

American experience with wartime prices indicates that inflation is more likely to come *after* than *during* a war; and our experience following World War I suggests that inflation is likely to end in depression, as it did in 1921-22. In the interests of avoiding such dire consequences, the

¹⁰ "Even the National Association of Manufacturers, who had seen no danger of a wild price rise when the N.A.M. was axing O.P.A. to death, was now worried. N.A.M. President Earl Bunting gloomed: 'If the constant upward winding of the spiral continues, you'll see one of the most terrible busts this country has ever had.'" (*Time*, April 7, 1947, p. 85.)

price controls required in a modern war should, we believe, be continued for a time after the cessation of hostilities. However, these controls should be *selective* rather than *general*, being applied only to such economic goods as are abnormally scarce; prompt and sympathetic consideration should be given to "hardship" appeals, though without a guaranty of prices that would cover costs plus a "reasonable profit" (which would render the program unworkable); and the control agency should make a point of removing the ceiling price from each good just as soon as it seems clear that public injury will not result.

Conclusion. We must not close this discussion without noting the fact that some extremely able financial experts doubt the desirability of attempting to control the general price level (because of economic disturbances which might result from such an attempt) and, further, seriously question the ability of the Board of Governors, or similar agency, to bring about a stabilization of general prices. On these two points, then, the final word has not been written. We cannot undertake, within the limits of a single chapter, to examine further the first of these two points. As to the second, it seems unlikely that we shall know definitely whether stabilization can be effected by the Board of Governors until we have given this body specific authorization to make the attempt, over a period sufficiently long to provide a fair trial. This we have not yet done.

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1. Distinguish between individual prices and general prices.
 2. What is the purpose of price index numbers?
 3. How and why are price index numbers weighted?
 4. Distinguish between a *general* index and a *wholesale commodity* index.
 5. What types of price index now compiled by the United States Bureau of Labor Statistics are referred to in the text?
 6. What is the relationship between a general price index, and an index of purchasing power, such as those presented in Table 41?
 7. How did the purchasing power of the dollar in 1915, 1920, 1925, and 1939 compare with its purchasing power in 1926?
 8. Write the equation of exchange, and explain the significance of each factor in the equation.
 9. Demonstrate arithmetically that a doubling of the quantity of circulating media (other things remaining unchanged) will cause a doubling of the price level.
 10. How does the introduction of credit affect the equation of exchange?
 11. What is the Quantity Theory of Money?
 12. What historical evidence have we that changes in M and M' may be responsible, in large measure, for changes in price levels?
 13. "High prices and low prices are equally harmless, if only one or the other, once adopted, will 'stay put.'" Explain.

14. "Gains and losses are likely to occur whenever there is an extension of credit over a period of years." Why?
15. If a person borrows when prices are low and repays when prices are high, does he gain or lose by the change in price levels?
16. What are the effects of general price changes upon persons who are dependent upon fixed money incomes?
17. "Prices take the elevator while wages climb the stairs." Explain, in connection with price levels.
18. Is the "wage earner" or the "salaried worker" the more favorably situated when general prices are rising? When they are falling?
19. Are "business men" more likely to welcome rises or declines in general prices? Why?
20. What was the specific purpose of the "market-basket plan"?
21. Give a brief description of this plan.
22. What difficulties might arise in the operation of the market-basket plan in the event of extreme changes in prices, either upward or downward?
23. What is the central idea of the Multiple Standard of Deferred Payments?
24. Outline Professor Fisher's plan for stabilizing the dollar, and explain how, presumably, it would operate.
25. What, if anything, could the Board of Governors of the Federal Reserve System do to stabilize general prices?
26. What is there about a wartime economy which tends to lead to inflation?
27. What measures were taken by the federal government, in World War II, to "siphon off" large portions of the excessively large quantity of circulating media which was in the possession of the people of the United States?
28. Explain the nature of, and the need for, price ceilings in wartime.
29. Discuss the degree of success with which wartime price controls functioned in the United States during World War II.
30. What are the chief arguments *for* and *against* the continuance of price controls in a post-war period? Examine these arguments in the light of your knowledge of the nature of price fluctuations and their consequences.

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Business Cycles

IN OUR EXAMINATION OF THE PURCHASING POWER OF MONEY IN THE PRECEDING chapter, we noted that general prices sometimes undergo extensive changes over a period of years. We shall see in the present chapter that there are fluctuations in business activity as well as in price levels. Indeed, the two are not unrelated; but our present concern is not so much with fluctuations in prices as with changes in economic activity. Changes of the type which we shall discuss are usually called business cycles.

THE NATURE OF THE BUSINESS CYCLE

"Business cycles are a species of fluctuations in the economic activities of organized communities. The adjective 'business' restricts the concept to fluctuations in activities which are systematically conducted on a commercial basis. The noun 'cycles' bars out fluctuations which do not recur with a measure of regularity."¹ This statement by a well-known authority is a satisfactory definition of business cycles, but it does not profess, of course, to be a description of these economic fluctuations. The nature of business cycles may be explained most clearly through the use of a chart indicating changes in industrial production.

A Chart of Business Activity. In Fig. 42 we have a graphic presentation of the business cycle as it is reflected in changes in the volume of industrial production.² Production may be counted upon ordinarily to increase in volume from year to year because of the demands of increased population. This growth is shown in Fig. 42 by a gradually rising broken line curve which shows that, on the whole, business activity has been increasing during the past thirty-five years. Had productive activities of the kinds here represented not experienced sharp fluctuations between 1913 and 1947, this trend curve would represent with a fair degree of accuracy the steady, continually growing volume of business transactions.

But a smooth, slowly ascending curve does not picture truly the productive activity of 1913 to 1947, or of any other reasonably long period, for that matter. For experience shows that business activity fluctuates from

¹ Wesley C. Mitchell, *Business Cycles*, New York, National Bureau of Economic Research, Inc., 1927, p. 468.

² Based on data of the Federal Reserve Board.

the general trend, now greatly and again but slightly. The extensive fluctuations, as we have said, are called business cycles. Referring to our chart, we note that, during this thirty-five year period, industrial activity shifted a number of times from one side of the trend curve to the other. These are the shifts that constitute business cycles. History has repeated itself since the post-1929 depression, for the curve of actual production (which in 1932 was well below the trend curve) in 1943 again went far above this trend curve of production.

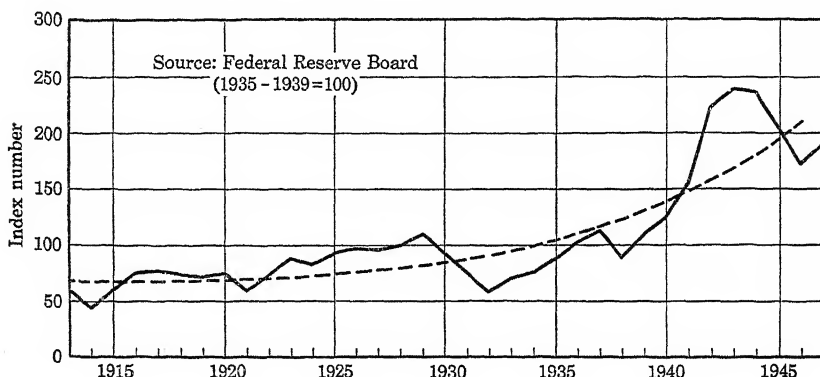


FIG. 42. THE BUSINESS CYCLE

This chart shows fluctuations in business from 1913 to 1947, as indicated by a curve based on indexes of industrial production for these years.

Length of the Business Cycle. Fluctuations in productive activity are sometimes great and sometimes small. There may be, in a single year, a number of minor fluctuations that cannot readily be shown on a small chart. Changes of this kind are of relatively slight significance. The business cycle proper covers a longer period than a year, and such fluctuations in business activity are much greater than those of any single year. The word "cycle," which has been so widely adopted in designating this particular economic phenomenon, suggests not only (as is stated in our definition) that the fluctuations recur with a measure of regularity but, further, that there is a return to a position of business activity previously occupied.

Our chart shows, for example, that production was at a low ebb in 1914. Then came a rise in activity which in two years took production above the trend curve. Following this spurt of productivity, there were several years of minor fluctuations, with a serious slump in 1921 from which business did not recover fully for almost two years. In this recovery, however, a new height of business activity was reached by the middle of 1923. Business was good from 1923 to 1929, with the exception of rather minor depressions in 1924 and 1927, which are indicated by the decline of the production curve in those years. The peak reached in 1929 represented a new "high" for

productive activity in the United States. Close upon this banner year came the post-1929 depression. The volume of production in 1932 was only about one-half as great as in 1929, but it then proceeded to increase steadily, except for the year 1938, until it reached the all-time peak in the war year of 1943, after which it suffered a decline when the abnormal wartime demand for goods subsided.

Thus we can see, without following further in detail the curve showing actual production during this thirty-five-year period, that the business cycle moves in wave-like motions. Not only does production tend to "come back" after it has suffered a recession, but the tendency is normally to strike a new high level of productive activity. This new level, we may once more note, is attributable largely to growth in population, but in part also to increases in individual demand which presumably represent improvements in standards of living.

"Periods" of the Business Cycle. It is customary, in describing the business cycle, to refer to several well-defined periods or phases which appear to accompany these wave-like changes in business activity. They may be listed as follows:

1. The period of prosperity.
2. The period of liquidation.
3. The period of depression.
4. The period of recovery.

TABLE 42. CHARACTERISTICS OF THE BUSINESS CYCLE

	Period of Prosperity	Period of Liquidation	Period of Depression	Period of Recovery
1. Industrial activity.....	Maximum	Decreasing	Minimum	Increasing
2. Prices.....	High	Falling	Low	Rising
3. Employment.....	Maximum	Decreasing	Minimum	Increasing
4. Wages.....	High	Falling	Low	Rising
5. Strikes.....	Many	Many	Few	Increasing
6. Business failures.....	Few	Increasing	Many	Decreasing
7. Bank deposits.....	Large	Decreasing	Small	Increasing
8. Bank reserves.....	Low	Increasing	High	Decreasing
9. Interest rates.....	High	Falling	Low	Rising

We shall examine these periods briefly, describing the effects of each upon industrial activity, prices, employment, and other elements that go to make up economic life. Table 42 is virtually an outline of this description, since it gives in tabular form the characteristics by which the periods of the business cycle are marked.

The Period of Prosperity. The period of prosperity is one of great industrial activity. Prices are high and stocks of goods, called forth by the inducement of high profits, are large. In the period of prosperity there is plenty of employment for workers, and wages are naturally high. Never-

theless, strikes are not unusual in this phase of the business cycle, since the workers, knowing that labor is relatively scarce and that business men are doing well, are likely to insist upon wage increases. Business failures, of course, are at a minimum, for this is a time when business men of even ordinary ability can make good profits.³

The items thus far mentioned relate to the manufacturing and commercial side of business, as contrasted with the financial side. So far as finances are concerned, there is a great expansion of bank credit during the period of prosperity. On this account, bank statements are frequently unsatisfactory; that is, they show small reserves, owing to the fact that banks have expanded credit greatly in response to the demands of business men. Because there has been a large expansion of credit and bank reserves are low, interest rates are usually high in the period of prosperity.

The Period of Liquidation. The period of liquidation is very unlike the period of prosperity upon which it follows, sometimes with appalling suddenness. In this phase of the business cycle, industrial activity is definitely curtailed and on the downward trend. Stocks of goods that have piled up during the preceding period are larger than can be disposed of readily, and as a consequence prices decline. For the same reason, and sometimes for other reasons which will be explained later, there is likely to be a good deal of unemployment. Unemployment means falling wages, since it permits the employer to replace present workers with others at lower figures, if employees will not take wage reductions. Nevertheless, workers, in the effort to maintain their wage scales, are not unlikely to go on strike to resist wage decreases, so that strikes are numerous in this period. Business failures are, of course, much more common in times of liquidation than in times of prosperity, and over a considerable stretch of time they become increasingly numerous. This, of course, is as we should expect it to be, for the period of liquidation is "settling up" time, when concerns that cannot meet their obligations are forced into bankruptcy.

Turning to the financial side of business, we find that bank credit is in process of contraction in periods of liquidation, since there is a tendency on the part of banks to call in their loans. This means increasingly larger reserves in the possession of the banks, so that bank statements are more satisfactory than in the period of prosperity. Because of the demands of business concerns for credit and the hesitancy shown by banks in extending credit at this time, interest rates are likely to be high, though in the process of falling.

The Period of Depression. Following industrial crisis comes the period of depression, during which industrial activity is at its lowest ebb. Because there is a small demand for commodities, prices of goods also are at their

³ But even in periods of prosperity, the number of business failures is startlingly high, as may be seen by reference to figures given in chap. 10 (vol. 1).

lowest. Since the demand is so slight, merchants and manufacturers are able to fill orders from stocks of goods which have been held over from the previous periods, and these stocks are depleted but slowly. The absence of extensive orders and the existence of sufficient stocks on hand make it unnecessary to keep industrial plants running, and as a consequence there is much unemployment.

Employers find it possible, during a period of depression, to force workers to take reductions in wages. Though there is a temptation to resort to strikes in order to resist wage reductions, the workers who have employment, realizing the weakness of their bargaining position and anxious to retain their jobs, usually accept whatever terms are offered by the employers; hence there are few strikes in time of depression. This is a most difficult period in which to conduct business. Some of the less capable enterprisers are unable to survive this trying period, and business failures are numerous.

Since business is simply marking time, there is little call for bank credit, and borrowings by business men are at a minimum. Former loans have been repaid, and bank statements are favorable, showing large reserves in relation to the amount of credit outstanding. The existence of these large reserves makes bankers eager to place loans, and this eagerness is manifested in low interest rates. But despite their willingness to use their resources profitably, the bankers often exercise in the period of depression an excess of caution with respect to eligibility of loans, which prevents borrowing by those who could use bank credit legitimately and advantageously. This undue caution is a hang-over from the period of liquidation, when banks have found it difficult and oftentimes impossible to collect the amounts due them.

The Period of Recovery. Business depression fortunately cannot last forever, but gives way to a phase of the business cycle known as the period of recovery. The wheels of industry begin to turn once more, in order to make goods necessitated by the depletion of stocks which have gradually been purchased even in time of depression. Increased demand brings with it a rise in prices, and the prospect of good prices leads to industrial activity which soon results in a fair-sized stock of goods. Unemployment begins to disappear, since mines, mills, and factories cannot be run without workers. Wages, which had been low in the preceding period, show an improvement; and wage earners, glad to find steady employment once more, manifest but little disposition to call strikes at the outset of the period of recovery. However, strikes increase in number as business continues to improve and workers seek to regain the wage losses suffered during the depression. Business failures are much less numerous than during a period of depression; the number of bankruptcies declines steadily in this and the following period.

Now that business is improving, business men resume once more the

practice of borrowing, and there is an increase in bank credit. This means, of course, that the expansion of credit by banks appears in bank statements, and the reserve percentages decline steadily as loans increase in volume. Since bankers now have plenty of opportunities to lend out funds, there is no need to offer the inducement of low rates of interest; consequently, interest rates rise during the period of recovery because of the expansion of bank credit.

The cyclical nature of business fluctuations is indicated by the fact that the period of recovery is followed by a period of prosperity. Thus we are brought back to our original starting point; but the height of industrial activity in this return is likely to be greater than in the preceding period of prosperity. Referring again to Fig. 42, we may note once more the great irregularity in business activity indicated by the now-rising, now-falling curve of production. It is evident, however, that the level of industrial production reached in each period of prosperity is higher than that attained in the preceding cycle.

PROBABLE CAUSES OF THE BUSINESS CYCLE

The Problem of Explaining the Cycle. The frequency of occurrence and the general similarity of business cycles constitute the basis for believing that it may be possible to find a general explanation of the manner in which each peak of prosperity leads ultimately to crisis, and a new peak eventually begins to rise from the trough of depression. But it would be quite a different matter to secure general acceptance of any specific explanation. Business cycles cannot be studied in the laboratory, but must be observed in their particular historical context. Almost invariably there are certain random factors that are peculiar to any given historical period. Hence, it is easier to find an explanation for an individual business cycle in specific terms than in general terms.

The problem is further complicated by the common tendency to seek monistic interpretations and explanations of developments in any field of inquiry. As we have seen, the business cycle is related to prices, production, finance—in short, to most aspects of business activity. It would seem to follow that developments in any of these fields might in part explain the development of the cycle. Moreover, the psychological factor, as distinct from the economic, may play an important part in bringing about cyclical movements, and the political factor is assuming increasing importance. For these reasons, any monistic explanation must be suspect. Pluralistic explanations, on the other hand, run the risk of being so general in nature as to be either meaningless in terms of definite cause-and-effect relationships, or incapable of being verified with accuracy, or both.

Factors Influencing the Cycle. Business cycle theories by the score have been developed, each stressing a particular "cause" as being solely

or chiefly responsible for cyclical fluctuations in business activity. We are told that business cycles are caused by sunspots, rainfall, wars, discoveries and inventions, and changes in population; by overproduction; by underconsumption; by the instability of our money and credit system; and by undue optimism or pessimism on the part of business enterprisers. It is not possible for us to examine these many theories critically.⁴ And since any monistic theory would seem to constitute an oversimplification, it is probably best to restrict ourselves to a description of the operation of certain factors which appear to play a part in any satisfactory explanation. These include industrial, financial, and psychological conditions.

By *industrial* conditions, we mean levels of production, commodity prices, wages, profits, the volume of employment, and the degree of industrial unrest. Cyclical fluctuations are generally measured in terms of these conditions. The most important of the lot is probably the level of production, since the other conditions may be expected to vary primarily as a result of earlier changes in the volume of production. By *financial* conditions, we mean primarily the level of bank reserves and bank deposits, and the level of the prevailing rate of interest. By *psychological* conditions, we mean the degree of optimism or pessimism which exists among those who play an active rôle in the guidance and direction of production. It is unquestionably true that business cycles are not purely mechanistic in character. If undue optimism or pessimism characterizes the attitude of the enterpriser and the capitalist, business activity may expand in the face of structural weaknesses in the economic system, or decline to a low level when external conditions are apparently favorable for expansion.

The "Self-Generating" Theory: A Pluralistic Explanation of the Business Cycle. The crux of the problem is to ascertain what factor or factors are responsible for the transition from one period to another. This does not mean a mere enumeration of the consequences of such a change, once it has begun. Nor is it the same thing as listing the wide variety of developments which might affect the duration and extent of a movement in a given direction, once that movement has started. To speak of the beginning of a cycle, however, is a contradiction in terms, for a cycle (like a circle) obviously has neither beginning nor end, but is a continuous process. Therefore, we must break into the cycle at an arbitrary point, and seek to determine why the conditions then existing failed to continue indefinitely, and instead were transformed in such a way as to bring about a passage from one period of the cycle to the next. To attempt to work backwards is impossible, for in so doing we should inevitably be forced to make our way through an infinite number of earlier stages. We must start, therefore, at some arbitrarily selected point and work forward.

Prosperity and the Trend Toward Crisis. Admitting, then, that our selection of a particular point is arbitrary, let us break into a "normal"

⁴ They are dealt with in detail in Gottfried von Haberler, *Prosperity and Depression*, Geneva, League of Nations, 1937.

business cycle during the period of prosperity. This period, as we have noted, is one in which business is booming. It is, among other things, a time of progressively higher prices. Rising prices mean large profits for business men. Goods are produced in anticipation of demand, and if prices are increasing steadily, commodities may be disposed of at figures which are often considerably in excess of the costs of production. For the selling price of goods in a period of rising prices will tend to be the cost of production of such goods at the time at which the sale is made. This price may be considerably greater than the actual cost in a period of rising prices, since into the making of the commodity in question have gone raw materials and labor purchased some time before the sale of the finished good, and purchased therefore at relatively low prices. Moreover, interest charges, salaries, and certain other items of expense almost never keep pace with rising prices. The net effect of these conditions is that profits are large when prices are on the upgrade.

Since business men are anxious to reap these high profits, they make every effort to expand production in times of rising prices, and on this account stocks of goods, employment, and wages are usually at their height in a period of prosperity. The truth is that toward the end of this period the industrial bubble is about ready to burst. Expansion in the production of goods is matched by an expansion in financial activity. The one, of course, has given rise to the other, for bank credits are expanded to their limits only when business is or has been booming.

The psychological attitude during the greater part of the period of prosperity is one of optimism. Business men, since they are making large profits, are naturally optimistic. But there comes finally a time when this optimistic attitude may be assumed rather than real. Captains of industry sometimes whistle to keep up their courage. Though they wish for and talk much about continued prosperity, they begin sooner or later to be fearful that the peak of industrial activity has about been reached. They know from experience that business activity runs in cycles and that periods of prosperity are followed by industrial crisis and depression. With the boom fully expanded, and with doubt and uncertainty in the air, it sometimes requires only a slight jar to change the period of prosperity into one of industrial crisis and liquidation. Sometimes, as in 1929, this jar appears in the form of a crash in the stock market.

Crisis, Liquidation, and the Beginnings of Depression. It is possible that in one or more lines of manufacturing there has been too great production during the period of prosperity, owing to the desire of business enterprisers to make large profits while prices are high. There may be, for example, an overproduction of automobiles, or radio sets, or some other article manufactured on a very large scale. When sales fail to keep pace with production, the natural tendency is to curtail production. An over-supply of automobiles may easily result in the closing of the plants of

one or more of our leading automobile manufacturers. An action of this kind throws out of work many thousands of wage earners. Not only is the purchasing power of these workers reduced, with a consequent depressing effect upon other industries, but a move of this kind is interpreted by many other business men as a sign that the period of prosperity has come to an end.

Other manufacturers decide upon a curtailment of their productive operations. Merchants having large quantities of goods on hand offer them at lowered prices in order to reduce their stocks and obtain funds. Manufacturers, now unable to sell at former high prices, demand that workers submit to reductions in wages. In the effort to resist wage cuts, employees resort to strikes, and again purchasing power is curtailed. Bank credit, which had been stretched to the utmost, is now contracted, for bankers, in view of the unsatisfactory industrial conditions, are anxious to call in their loans. But business men find it difficult to meet their financial obligations as these loans are called. In their effort to secure the necessary funds, manufacturers and merchants sacrifice stocks of goods on hand, and offer to pay high rates of interest for loans which will tide them over the emergency. Despite their best efforts, many are unable to weather the storm, and go down in bankruptcy.

The mental attitude of business men during the period of liquidation and in the early stages of depression is naturally one of doubt and fear. Not knowing what the immediate future will bring forth, but looking forward to some months of poor business, they hesitate to put into execution whatever projects they may have had in mind during the period of prosperity; and this lack of action leads definitely to that state of inaction, sometimes long drawn out, which is known as the period of depression.

Depression and the Move Toward Recovery. This period, as we noted in an earlier description, is one which finds business virtually flat on its back. Tendencies which were apparent in the period of liquidation have been allowed to run their course, with the result that production has come almost to a standstill. The psychological atmosphere of the period of depression is one of extreme pessimism. With business in a state of suspended animation, no one seems to know just what steps should be taken to bring it back to life. And yet, if the self-generating theory is sound, it is in this very condition of business prostration that the causes which lead to the next phase of the business cycle, the period of recovery, must be sought.

Recovery and the Causes of Prosperity. It is probable that the starting point of revival is usually the exhaustion of stocks of goods. It may be that the surplus of automobiles, which we suggested as bringing to an end the period of prosperity, has slowly been disposed of, and that there is again a demand for cars which will be available only if automobile

plants resume production. An announcement from the Ford Company or the General Motors Corporation that operations are to be resumed and employment given to a hundred thousand men, would stimulate activity in businesses of all kinds.

Such an announcement would appear to many to herald the turning point of the tide. It is the final word for which the less venturesome have been waiting. Enterprisers throughout the country again take heart, and factories here and there resume operations or, in some cases, go on "full time" after a period of curtailed production. Workers are available at low wages at the outset of this period, materials may be had at bargain prices, and banks, because of their large reserves, are anxious to extend credit at moderate rates of interest. These particular advantages are likely to disappear as the revival of business makes considerable headway. That is to say, wages increase, interest rates rise, and other expenses advance as production assumes normal proportions. However, the attitude of business men is now one of increasing courage and optimism as regards the future. It is felt that the "slough of despond" has been passed, and that the months ahead hold bright prospects.

The process of recovery may be a relatively slow one, but in the course of a year or so machines are once more humming and the business cycle passes by almost imperceptible steps into the period of prosperity. Thus we find that in each of these several phases of the business cycle are the conditions which almost inevitably bring about the succeeding phase.

THE STABILIZATION OF BUSINESS ACTIVITY

Desirability of Stabilization. Every period of depression means bankruptcies, unemployment, idle resources, want, and suffering. The desirability of introducing stability into economic activity, for the purpose of eliminating, or mitigating, the catastrophic consequences of recurrent depressions, would seem scarcely open to question. However, reliance upon pure automaticity, as opposed to conscious control, would necessitate the rejection of deliberate attempts at stabilization. It might be argued that the depression represents a painful but necessary period of cleansing for the economic system. Inefficient producers are driven out of business, and only the efficient survive. The expansion of production which ultimately follows the contraction of depression finds the productive agents reallocated, to a certain extent, in the interests of greater efficiency and of maximum ability to satisfy changed and changing demands.

Viewed in this sense, the business cycle insures the survival of the fittest, and, because it constitutes a threat to producers, it serves as an added incentive to maximum efficiency in production and the greatest possible effort to direct production so as to accord with the prevailing public desires. Finally, the believer in unadulterated automaticity may

resort to the generalization that the cures attempted by any deliberate interference in the unhampered functioning of the economic mechanism will inevitably be worse than the disease which they seek to overcome. The implications inherent in such an attitude were noted in the preceding chapter. For the same reasons, we are again forced to reject this line of argument and to hold that any proposals which offer the possibility of achieving a greater degree of stability in our economic life merit our serious consideration.

The Significance of Proposals for Stabilization. We have given some indication of the complexity of the business cycle. We were forced to reject monistic interpretations of the phenomenon. Consequently, there is no reason to believe that proposals dealing with isolated factors can eliminate the cyclical nature of economic activity. Considered separately, the most that can be expected of the proposals discussed below is a diminution in the frequency and severity of continuing fluctuations. Any considerable degree of stability would probably require the simultaneous adoption of a number of devices. It should be clearly realized that no single measure, and possibly no combination of measures, is likely to provide a *complete* cure.

Cyclical Stability Through Price Stability. The effect of rising price levels, in stimulating too rapid an expansion of production during periods of recovery and prosperity, has been mentioned. Conversely, in the period of liquidation, falling prices force unduly rapid contraction. The way in which purchasing power may lag immediately preceding a crisis, because of the failure of wages and salaries to advance as rapidly as prices, has also been observed. It becomes apparent, then, that a plan of price stabilization might be used in an attempt to influence cyclical fluctuations. Hence, either of the proposals considered in the preceding chapter for stabilizing the general level of prices might be applicable also to the present problem.

There is no need to describe and analyze these proposals again. It would appear, however, that the most promising proposal for price stabilization in what may be called "normal times" is the intelligent use of the existing control over bank credit now entrusted to the Board of Governors of the Federal Reserve System. The potentialities of increased stability from this source are great. However, their successful application would require not only a high order of intelligence, but also the ability to resist public pressure. The achievement of stability would require the periodic use of measures for checking expansion. It is almost inevitable that both enterprisers and labor would vigorously resent and oppose governmental action that would be likely to limit the expansion of production and employment. If, however, control is to be effective, it must be applied before expansion has run its normal course and collapsed under its own weight. If the control of credit could be made to prevent undue expansion, the

necessity for the liquidation and contraction which lead to depression would never arise.

Stability Through Public Works. A second approach to the problem of stabilization centers around the maintenance of a reserve of public works projects. We have seen that, once the peak of prosperity has been reached, the initial steps in the direction of contraction lead to the creation of conditions which force further contraction. Specifically, contraction in even a single important field diminishes the available supply of purchasing power, and this decreases sales generally, and necessitates a reduction in production in a variety of fields. It is argued that if the government were to keep in reserve a large-scale program of needed public works, and begin to put the program into operation as soon as contraction in private business took place, the decline in purchasing power would be prevented and the spiral of contraction halted.

It should be noted that we are dealing here with a plan which is not to go into effect until the peak of prosperity has been reached and passed. There is abundant reason to suppose that any such peak represents an abnormally high level of activity, which probably ought not to be maintained by artificial means, and certainly could not be permanently maintained except through huge governmental expenditures which would eventually threaten the credit standing of the government. The chief value of expenditures for public works in connection with the business cycle would seem to lie in the possibility that they might prevent a panic, and promote instead an orderly and gradual contraction. To attempt to prevent any recession whatsoever from the peak of prosperity would appear to be unwise. Hence, the proposal under consideration seems more likely to work out successfully in limiting the severity of cyclical fluctuations than in decreasing the frequency with which such fluctuations occur. It should be clear that the peak of prosperity would not reach such dizzy heights if, in "good times," the government collected revenue in excess of its current needs, thus reducing somewhat the purchasing power that would otherwise be available for private spending; nor would the trough of depression reach such profound depths if, in "bad times," these surplus funds were expended on public works.

Stability Through Unemployment Insurance. Somewhat similar to the plan just described, because of its dependence on maintaining purchasing power, is the proposal to secure stability through the agency of unemployment insurance. The benefits paid to the unemployed from insurance funds would presumably take the place of the wages workers would be losing because of unemployment attributable to lessened production. Here, again, is an attempt merely to prevent the reaction from a business boom from becoming too serious; and the usefulness of this device would lie chiefly in its contribution to orderly contraction as an alternative to the panic of liquidation.

If we are to make expenditures for public works or pay insurance benefits to the unemployed, we must use care in selecting a sound method of raising the required funds. An unemployment program that aims to prevent the spread of a business contraction which has already entered its initial stages should not be financed by levying new taxes. For additional taxes would curtail private spending, and would merely change the direction of economic activity, and not increase its volume. Likewise, it would be futile to pay unemployment benefits from the receipts of current taxes. This financing should be done, rather, by public borrowing, on the theory that the situation is one of emergency, and for the reason that this borrowing will tend to increase the total volume of circulating media, and thus of purchasing power.

There is no good reason why unemployment premiums should not be collected in normal times, and the funds thus accumulated used to reduce the public debt, so that governmental credit and therefore borrowing power would be in excellent shape when emergency loans were necessary to provide funds for the payment of unemployment insurance benefits. Presumably, the financing of public works (advocated in the preceding section) would be done in essentially the same way—the public debt being reduced steadily with payments made from the surplus funds collected year by year, so that the government would be in a favorable borrowing position when it was necessary to build extensive public works in order to combat depression.

Stability Through Direct Action. It will be seen that the plans discussed thus far suggest an approach to the problem of stability. They propose that we aid in promoting stability in production through such devices as the manipulation of money and credit, a public works program, and contributions to purchasing power in the form of unemployment benefits. The *direct* approach would involve the establishment of production quotas, and the direct control of output in the interests of stability. Under present conditions, we have no choice in this country as between the direct and the indirect approach. The former would mean the violation of the institutions of freedom of enterprise, freedom of competition, and private property, which most Americans prize highly. The direct approach could be used only by the exercise of a much larger degree of governmental control over business than now exists in the United States.

The utilization of the direct approach must await, therefore, our decision as a people to embark upon a planned economy under the guidance of the state, should such a decision ever be made. Whether such a transition is desirable is a debatable question. It is highly probable that a fair degree of stability could be attained in a planned economy. But whether stabilization would take place at a level so low as to more than offset the advantages derived through the elimination of frequent fluctuations is an open question. Moreover, we have in the past succeeded in maintaining a

long-run *rising trend* of production, in spite of periodic fluctuations. It is possible that a rigidly controlled economy would tend to become static, substituting long-run stability for our present long-run expansion.

Among the characteristics of our present economic order are the following: A considerable degree of freedom of action for privately owned enterprises, with regard to price and production policies; rapid technological progress, resulting in frequent changes in the methods of production, and the continual development of new industries and disappearance of others; practically complete freedom of choice for consumers, with consequent frequent changes in the nature of demands; at least relatively free competition for the agents of production; and various legislative restrictions upon certain activities that are adjudged to be in restraint of competition. So long as these characteristics survive, it seems highly improbable that we shall succeed in eliminating the business cycle as a periodically recurrent phenomenon. But there is no need to accept the idea that we can do nothing either to mitigate the intensity and consequences of periodic contractions, or to check the unduly rapid expansion which seems to be the root of the difficulty. To adopt a defeatist attitude such as this would indicate an unwarranted lack of faith in human ability.

Reform, Relief, and Recovery. Though an ounce of prevention is said to be worth a pound of cure, societies often manifest more interest in solving problems after they have arisen than in preventing their appearance in the first place. This is certainly true of the specific problem of the business cycle. The business community in general worries but little, during the upward swing of the cycle, about the possibility that expansion may eventually get out of hand. Most of our concern over business cycles is reserved for the period of depression.

The consequence is that we tend to confuse three separate and distinct classes of proposals. There are, first, the measures of reform. These are attempts to increase the degree of stability in economic activity, and include certain plans that we have already discussed. Second are proposals for relief. These represent efforts to lessen the suffering and want that mark every period of economic stagnation. Third are devices aimed at bringing about recovery. Included in this class are all measures that are designed to increase economic activity. The measures directed toward bringing back recovery are temporary measures that have immediate objectives, and differ from the reform measures, which are permanent in nature and are aimed at long-run objectives. The situation is further complicated by the fact that there may be a considerable amount of overlapping among these three types of activities.

In the period which immediately preceded the crisis of 1929, little concern was manifested in fluctuations in economic activity. The era was characterized by an almost unprecedented optimism and a widespread belief that business depressions were phenomena of merely historical

interest. But with the stock market crash of that year came disillusion, and our actions in the depression years provided a striking example of simultaneous attempts at reform, relief, and recovery. This was particularly true of the period following 1933, for the federal administration in power prior to that date had based its policy on the assumption that the economic structure was fundamentally sound, and that little, if anything, in the way of reform was needed.

Governmental Attempts at Stability Since 1929. It is well to note that, though political agencies in this country seldom hold the power to control economic activity directly, nevertheless it is to these agencies that we must turn for the initiation of any extensive measures that may be indicated for achieving either economic reform or business recovery. When faced with disequilibrium throughout the entire economic system, we cannot rely on the efforts of individual enterprisers to restore normal conditions. Action on an industry-wide basis, through trade associations or labor organizations, is only slightly less futile, (1) because of the high degree of interdependence between industries, and (2) because "cooperation" between business men is so likely to take the form of price-fixing through restriction of production.

Governmental attempts to remedy the situation that existed between 1930 and early 1933 consisted in large part of expressions of confidence in the fundamental soundness of our institutions and appeals to employers to maintain employment and wages. Regardless of whether our enterprisers saw the social desirability of following this advice, the situation was such that they could not afford to do so in the absence of a governmental program directed toward insuring a general maintenance of purchasing power.

The Roosevelt Stabilization Program. With the inauguration of the Roosevelt administration in 1933 came the beginning of the most vigorous program of reform, relief, and recovery with which the United States has ever undertaken to combat a business depression. We may outline this program briefly at this point, though many of its specific features are described elsewhere in this volume.

As we have said, it is often hard to distinguish clearly between relief and recovery measures. However, we may consider as predominantly "relief" measures certain agencies that were established (1) to provide loans to distressed debtors and (2) to promote public works. Among the first was the Reconstruction Finance Corporation, established during the Hoover administration. Its task was to make loans (1) to banks that were fundamentally sound but in temporary difficulties; (2) to the several states for use in relieving unemployment; and (3) to corporations on the verge of bankruptcy. The Farm Loan Corporation was established to provide credit to farmers; and relief to home owners was extended through the Home Owners' Loan Corporation. These three agencies unquestionably aided in mitigating the suffering which inevitably accompanies a period

of depression. They served the further desirable purpose of retarding the rate of liquidation.

The public works program inaugurated by the Roosevelt administration was unprecedented in its scope. Several billions of dollars were appropriated in each of a number of years, for carrying on this program of public construction. The desirability of planning public works in advance soon became apparent, for the program was slow in getting under way because adequate plans had not been prepared. Further delay was caused by a dispute over the relative merits of long-range planning and the building of works of lasting usefulness, as contrasted with engaging in a host of unrelated projects in which wages for labor would be the predominant cost. From the point of view of economy, the extensive adoption of the second of these policies was probably unfortunate.

While loans and expenditures for public works may halt a downward trend, action of a sterner character is required to promote positive revival. Hence, the Roosevelt administration experimented with a variety of measures dealing with monetary matters. The general program has been termed "controlled inflation." The President was granted power to reduce the gold content of the dollar, to issue large additional quantities of "greenbacks," and to increase the quantity of silver in the monetary system. The object of these devices was, apparently, to raise the general level of prices, and this in turn was expected to lead to increased productive activity, for reasons which were discussed in the preceding chapter. However, this stimulus to price rise was offset, to some extent, by difficulties experienced in effecting an expansion in bank credit, over which the government had no direct control. These difficulties led to renewed demands, in certain quarters, that the government be given control over all agencies for the creation of credit. Whether this would or would not be desirable, it is certain that price control can be made genuinely effective only through the regulation of both money and credit, and not of money alone.

A further attempt to aid recovery took the form of trying to increase the incomes, and thereby the purchasing power, of wage earners and farmers. The National Industrial Recovery Act sought to increase wages and decrease unemployment by reducing the length of the working week. The cooperation of employers was secured by granting them, through the codes established under the Act, the right to impose limitations upon price competition, and in some cases upon the volume of production, within a given industry. The Agricultural Adjustment Act sought to increase farm incomes by raising the prices of agricultural products. This was to be done by reducing crop acreage. Both of these Acts are open to criticism on the ground that they embodied a general policy of curtailed production. As a long-run objective, such curtailment has no economic justification. As an emergency measure, it seems a highly dubious method of getting back to either a high level of employment or a large volume of

industrial production. Further, both measures revealed the difficulties of governmental efforts to influence economic activity, when the government has little or no power to control prices.

It is probable that the N.I.R.A. prevented wages from falling to as low a point as they would have reached had no such device been adopted. However, far from insuring against the possibility of prices increasing at a more rapid rate than wages, the Act practically invited such a wage lag. Hence, it contributed little to the real income of industrial workers. The restrictions on production embodied in many of the codes likewise offset the increase in employment which might otherwise have resulted from the undeniable reduction in hours. The increases in the level of industrial commodity prices also offset, to a considerable degree, the benefits of the increased money incomes that accrued to farmers through the operation of the A.A.A.

The Supreme Court ruled that both of these Acts were unconstitutional. However, in the field of agriculture, the Agricultural Adjustment Act of 1938 provided an essentially similar farm measure. This Act is dealt with in our discussion of agriculture.⁵ The N.I.R.A. has not been replaced, but the Fair Labor Standards Act of 1938 provided for increases in the money incomes of industrial workers whose wages were strikingly low.

In the field of "reform," the Roosevelt administration adopted the following measures: (1) The passage of legislation increasing the powers of the Federal Reserve System; (2) the establishment of the Securities Exchange Commission; (3) the attempt to improve industrial relations as outlined in the Wagner Act; (4) the inauguration of a comprehensive program of social insurance. What will be the effects of these measures upon business stability in the future is a matter of speculation. It would appear that the possibilities of checking an undue expansion of business before it has attained dangerous proportions have been increased. It would also seem probable that the widespread payment of unemployment benefits will act as a brake upon the downward trend of purchasing power in periods of contraction. There is, however, no reason to believe that the problem of economic instability has been solved to any appreciable extent. It must be borne in mind that many governmental measures adopted in the post-1929 depression were designed to meet emergency conditions of that particular period of "hard times," and might not be applicable to another, and different, depression.

THE THEORY OF FULL EMPLOYMENT

We must not close the present chapter without discussing briefly a program for combating depression that has won many adherents among economists and others, more particularly since 1936 when the late Lord

⁵ Chap. 45.

Keynes published his now famous work, *The General Theory of Employment, Interest, and Money*.⁶ In this book, Keynes presented the results of a study of unemployment which had been engaging his attention for some years.

The Keynesian Approach to Unemployment. The "Keynesian approach" to the problem of business depression, and the unemployment which inevitably accompanies it, may be described in a greatly simplified form, as follows: Production of the commodities and services which are turned out in a given period involves the expenditure of sums of money in the form of costs of production. To the persons to whom the payments are made, this *expenditure* constitutes *income*. Furthermore, the amount of expenditure and the amount of income are necessarily equal, for what is expenditure to the payers is income to the receivers. If all of this income is spent promptly, it will provide the funds for financing an equal amount of production in the *following* period—and this is true regardless of whether it is spent for consumers' or producers' goods. If more than this amount is spent, having been added to from other sources, production in the ensuing period will be stimulated. But if less than the total income is expended, through hoarding or some other type of withholding of purchasing power, production will be depressed, it will reach a smaller total than in the previous period, and unemployment will result.

"Offsets" to Savings. We saw, earlier in the chapter, that depression follows close upon the heels of cumulative prosperity, which means that a high level of employment and income gives way to a low level of both employment and income. The Keynesians maintain that the business boom, which brings a rise in national income, brings increases also in most individual and family incomes, and that, under these conditions, "billions of dollars . . . are saved each year because people have incomes in excess of their consumption needs, because of a desire for personal security, because of power considerations or greed, because of automatic institutional arrangements, and for a thousand other reasons. It is irrelevant whether the process is deliberate or unconscious, whether prudence and thrift are involved or greed and lust, whether or not there is pain and abstinence. The desire to accumulate is a social fact, to be taken as such. And whatever might or might not be true of a Robinson Crusoe economy, it is clear that in modern societies individuals save regardless of the magnitude of investment outlets. Even if no new securities were floated, attempts to save would continue; and if old securities were not available, it would still be possible to accumulate non-interest-bearing assets in cash."⁷ It must be remembered, of course, that in addition to individual and family sav-

⁶ John Maynard Keynes, *The General Theory of Employment, Interest, and Money*, New York, Harcourt, Brace & Company, Inc., 1936.

⁷ Paul A. Samuelson, in *Postwar Economic Problems* (Seymour E. Harris, ed.), New York, McGraw-Hill Book Company, Inc., 1943, pp. 36, 37.

ings are the savings of business enterprisers. It is the withholding of *all kinds of savings* from the expenditure stream that leads to a reduction in production and an increase in unemployment, unless these savings are offset in some way. The normal offset to savings is investment by the savers or their agents; but in the absence of adequate private investment other offsets must be found.

Granted that large sums out of the total income that was produced in the preceding period are withheld from current expenditure, it would seem to follow that the deficit must be made up if the volume of forthcoming production is not to decline. It is the failure to make up this deficit that turns prosperity into depression, and full employment into unemployment. To insure the continuance of full employment, and the avoidance of depression when total expenditure for consumption and investment is inadequate, other funds must be found which will offset the amounts saved, and thus bring the total amount expended up to its former high level. Only in this way can production, and consequently employment, be kept from declining. Though there are a number of possible offsets to these savings,⁸ the one that bulks largest in the program of the Keynesians is governmental spending.

The Government's Rôle in Providing Full Employment. Up to this point, we have purposely omitted any mention of governmental spending, though it is obvious that expenditures by government often play a very important part in stimulating or maintaining production and employment, and it is in governmental spending (national, state, and local) that the Keynesians find the remedy for oversaving. We have seen that income, once received, may or may not be returned promptly to the expenditure stream. It is proposed that, whenever there is a deficit in expenditure such as we have described, the government shall undertake (through its taxing and borrowing power) to supply the funds that are required to bring the total expenditure up to the amount needed to provide full employment.

This does not mean that the government itself would go into business by becoming a producer of goods, but rather that it would finance the purchase of desirable goods on a sufficiently large scale to take up the slack which would otherwise result from the failure of a considerable portion of the *income* to be converted promptly into *expenditure*. "Private business can and will do the job of production," says Professor Hansen, a prominent advocate of governmental spending for the maintenance of employment. "It is the responsibility of government to do its part to insure a sustained demand. We know from past experience that private enterprise has done this for limited periods only. It has not been able to insure a continuous and sustained demand. The ever-increasing gigantic powers of production of the modern industrial system, far exceeding those of any earlier experience in history, mean that an enormous output has

⁸ *Ibid.*, pp. 40-46.

to be reached before full employment is approached. Private industry and government together must act to maintain and increase output and income sufficiently to provide substantially full employment."⁹

The Meaning of Full Employment. Some opponents of governmental spending to provide work have debated at considerable length the meaning of "full" employment, and argued that even in periods of peak production there has always been and will continue to be some unemployment. We have been reminded that there are unemployables, who either are incapable of doing work that the world wants done or for temperamental or other reasons simply find it impossible to hold jobs; and that among our able workers some are always out of work by reason of seasonal or technological unemployment while others are in process of moving from old to new jobs, and are for the moment unemployed.

It is only fair to say that the Keynesians do not pretend to prescribe for unemployment of these kinds, which may on the average affect a million or more workers annually, but for the prolonged and much more deadly economic ailment of cyclical unemployment. One writer, in what seems to us a sound interpretation of the term, defines full employment as "a condition under which every person who is able and willing to work can find enough employment in the course of a year to earn not less than enough to maintain his habitual standard of living."¹⁰ The problem, then, becomes one of preventing the recurrence of business depressions, with their burden of involuntary idleness on the part of persons of unquestioned ability who are obviously anxious to find work. To avoid fruitless controversy over the impossibility of achieving *full* employment, when the term is interpreted literally and rigidly, some writers have adopted the practice of using the expressions "substantially full employment"¹¹ and "reasonably full employment."¹²

What Might the Government Buy? Critics of this kind of program frequently cite the governmental expenditures of the post-1929 depression as evidence, first, that such spending is very wasteful, and, second, that it does not put a speedy end to a depression.

To the first of these contentions, the Keynesians answer that our governmental spending in the 1930's, so far as it was wasteful, was so largely because it was unplanned. Extensive, hastily executed projects for which detailed plans have not been drawn up in advance are pretty certain to be inefficiently carried out. The Keynesians hold that well-considered planning, which has reached the blueprint stage well in advance of the emergency, would give us an excellent chance to get "our money's worth" in return for whatever expenditure would have to be made in order to insure

⁹ Alvin H. Hansen, in *ibid.*, p. 14.

¹⁰ E. A. Goldenweiser, in *Jobs, Production, and Living Standards*, Washington, Board of Governors of the Federal Reserve System, 1945, p. 4.

¹¹ Alvin H. Hansen, quoted in the present chapter.

¹² *Fortune*, Supplement, December, 1942, p. 7.

full employment; and that the expenditure, moreover, could always be made for goods of which society stands in genuine need and of which we are unlikely ever to have an excess. Roads (including underpasses at railway crossings), more adequate educational institutions of all grades, enlarged hospital buildings with the most modern facilities, new housing for millions of families with small incomes—these are but a few of the “public” projects upon which national, state, and local governments might conceivably spend funds which, if not spent in these ways to avoid depression, would have to be expended in large measure for purely “relief” purposes.

It has been suggested, moreover, that there are many other types of expenditure which would pay large social dividends, over and above the prevention of depression (if, indeed, it were prevented) or its reduction to a more manageable size. Sir William Beveridge, in proposing a program of this kind for England, lists not only public spending of the kinds we have mentioned above, but also investment in a socialized sector of industry, including transport and power and coal or steel; the creation of a National Investment Board to provide loans and tax rebates to private business as a means of stabilizing private investment; the encouragement of low prices for essential consumers’ goods, if necessary, by a system of subsidies; and an increase in private spending to be brought about by increased national income and broadened social security provisions. Some of these suggestions, it will be noted, are at present more appropriate for England than the United States, since they assume a larger degree of public ownership than prevails in this country.

As for the criticism that our public spending did not put to rout the greatest depression we have ever experienced, the usual answer is that the program which we adopted was a halting, half-hearted one; that we did not at any time spend sums large enough to provide full employment, but continually lived in hope that the governmental “pump-priming” would soon enable private enterprise to go ahead without public assistance; and that public spending for full employment, once begun, must be carried on relentlessly until the battle is won. Indeed, the Keynesians see no reason why the government should not indefinitely finance full employment, since they regard such financing as less wasteful than paying relief benefits to millions of unemployed and having thousands of businesses closed down because demand has not been sustained. Moreover, since it is axiomatic that human wants are indefinitely expansible, they hold that there will always be worth-while undertakings upon which to spend public funds in such quantity as to provide the expenditure required to maintain an economy which would offer employment to all who were able and willing to work.

Paying the Bill for Full Employment. The ordinarily troublesome question of how to pay the bill is met by the Keynesians in this way: The

cost of providing full employment, like the cost of every governmental project, will have to be paid from public revenues. This means, in the long run, that the people must pay for these desirable goods through taxation, though at times the cost might have to be met through borrowing—that is to say, through “deficit financing.”

To those who accept the Keynesian doctrine, the problem of securing sufficient funds holds no terrors. What must be done above all else is to keep production going! If the output of the country is maintained at a high level, the national income will necessarily be large and there will be no difficulty in securing from taxation whatever revenue is required to finance the program of full employment. As Professor Hansen puts it:

The notion that we cannot finance our production is quite without foundation. Every cent expended, private and public, becomes income for members of our society. Costs and income are just opposites of the same shield. We can afford as high a standard of living as we are able to produce. We cannot afford to waste our resources of men and material. We cannot afford to use them inefficiently. But we cannot afford idleness. The idleness of the decade of the thirties was responsible for the loss of 200 billion dollars of income. . . . There is not—there cannot be—any financing problem that is not manageable under a full-employment income. From an income so vast [as we produced in war years] we can raise large tax revenues—large enough to service any level of debt likely to be reached and to cover all other government outlays—and still retain for private expenditures much more than we had left in former years. . . . But it is not necessary or desirable under all circumstances to finance all public expenditures from taxes. Whether taxes should equal, fall short of, or exceed expenditures must be decided according to economic conditions.¹³

The Current Attitude Toward Full Employment. There can be little doubt that people in general favor full production—a volume of output which would keep our factories, mills, stores, and other places of business humming. Probably most Americans would prefer to have this full production—and consequent full employment—brought about through free enterprise rather than through governmental “interference.” But some at least have come to agree with Sir William Beveridge in his belief that no power less than the state can assure adequate total spending at all times. It was doubtless the acceptance of this view, coupled with a recognition of the necessity for outlawing unemployment, that prompted the Editors of *Fortune* in 1942 to publish this declaration: “We propose that the government should underwrite permanent prosperity: that it be established government policy, whether Republican or Democratic, to maintain reasonably full employment in the United States.” With this statement went the argument that private industry must have “every chance to operate at capacity and to invest as much of the nation’s savings as it can absorb.” But the conclusion was unequivocal: “When involuntary unemployment

¹³ *Postwar Economic Problems*, p. 15.

threatens to be either chronic or widespread, it is not to be borne. We believe the government should set a minimum, and a minimum reasonably close to our full capacity, below which employment should never be permitted to fall."¹⁴

Professional economists are divided in their appraisal of the desirability of attempting to avoid depression and unemployment through governmental spending. The average American citizen, we may safely assume, knows little or nothing about the Keynesian theory; and the action taken by Congress in 1946 on a "full employment" proposal indicates that the idea has not yet won great favor in our national legislative halls. It is true that Congress passed the Murray-Patman Act, which purported to deal with the problem; but what began as a "full employment" measure wound up, as we recorded in Chapter 25, as an "employment-production" act which gives little promise of providing the country with the detailed, long-range program which the Keynesians regard as essential to their program. Certain persons who were keenly interested in the passage of effective legislation of this type accepted the Murray-Patman Act as "better than nothing" and "a move in the right direction"; but it is hard to believe that this Act will be the instrumentality through which either the truth or the falsity of the Keynesian theory of employment will find practical demonstration.

Criticisms of Public Spending to Provide Full Employment. Critics of programs of this kind direct their attack along several lines. First of all, they question the necessity of governmental spending on a large scale, arguing that if government will adopt a "hands-off" policy, business depressions will doubtless come and go much as they did prior to the post-1929 depression—which, they charge, was prolonged by "interference" from the Hoover and Roosevelt administrations. They frequently attack the so-called theory of economic maturity—the notion that the country has so fully exploited its economic possibilities that attractive opportunities for investment are too limited to use up our unconsumed current income—though this theory is not an essential part of the Keynesian doctrine.¹⁵ They hold that if the government will only restrict its economic activities to the encouragement of free enterprise, by passing just tax laws and other legislation favorable to business, private investment will be so greatly stimulated that governmental spending to insure full employment will be unnecessary. They argue that there is no guaranty that governmental spending would solve the problem of unemployment, that it might easily lead to governmental participation in control, to a considerable degree of government ownership, or even to a planned economy closely resembling socialism, and they point out that in a society of this type we would sadly miss certain "freedoms" which we now accept as a matter of course.

¹⁴ *Fortune*, Supplement, December, 1942, p. 7.

¹⁵ *Ibid.*, p. 8.

These are important criticisms, to each of which the Keynesians naturally have what they consider to be adequate answers. We cannot undertake to examine them in detail though in most instances they have been touched upon elsewhere in this book.¹⁶ The plain truth is that no one knows definitely and with certainty what the outcome of a thoroughgoing program of governmental spending would be, and the chances are that we shall never know unless and until we try it out. An economic society which is beset by recurrent depressions and unemployment "takes a chance" no matter what its course of action or inaction may be. Undoubtedly there is a possibility that harm might result from the adoption of the policy of spending which we have been examining. We incline to the view that a freely operating capitalistic system, with a minimum of governmental control and regulation, is likely to furnish a higher average level of employment, production, and income than would result from the adoption of any governmental full employment policy which did not include some possibility of eventually leading to collectivism, and perhaps even to political and economic dictatorship. On the other hand, there may be grave danger in not taking specific measures to conquer the business depression. Such well-known economists as Frank H. Knight, Paul H. Douglas, George Soule, Joseph A. Schumpeter, and A. R. Burns have voiced fears for capitalism¹⁷ which are strikingly similar to those expressed by Professor Hansen in the following statement: "It is no longer possible to accept the thesis that cycles of prosperity and depression may be complacently regarded as a characteristic of a system of free enterprise and private property. In a modern world no system can survive which permits the continued recurrence of serious depressions. Should it prove true, as some still argue, that periodic depressions are an inevitable concomitant of private property and free enterprise, then this system is doomed."¹⁸

Conclusion. In bringing our discussion of business cycles to a close, several questions of general significance may be raised. Is it true that the degree of economic stability attainable is in direct proportion to the economic control possessed by the government? If so, to what extent are we willing to sacrifice our present individual freedom of initiative in the interests of increased stability? To what extent can stability be attained without acting as a deterrent to the normal tendency of our economic system to expand? It is with a recognition of the problems set forth and implied in these questions that attempts to find a solution of the business

¹⁶ See, for example, the discussion of governmental functions and expenditures in chap. 43.

¹⁷ See John Ise, *Economics*, New York, Harper & Brothers, 1946, pp. 572, 573.

¹⁸ *Postwar Economic Problems*, p. 10. Business analysts and captains of industry have given expression to similar views. Said Paul G. Hoffman, president of the Studebaker Corporation, recently: "We cannot live with fluctuations such as that which took place between 1929 and 1932, when business volume dropped more than 50 per cent. Another collapse of that magnitude might cost us our free economy." (Quoted in *The New York Times*, June 26, 1947.)

cycle must be made. No phenomenon in the economic world has more serious consequences or presents greater difficulties than the one we have been examining. Indeed, the knowledge and understanding needed for an adequate solution of this problem are still largely lacking. For the present, at least, the problem must be approached experimentally, in the hope that we may come across clues which will lead us eventually to the development of a satisfactory solution.

1. What is a "business cycle"?
2. Explain the significance of Fig. 42. Just what does this chart represent?
3. Why might the production of a country be expected ordinarily to increase in volume from year to year?
4. Contrast the irregular production curve in Fig. 42 with the "trend" curve that appears in the same figure.
5. How long does a business cycle last?
6. In which years during the past two decades have we suffered seriously from decreased production? Which have been "boom" years?
7. Why is there a tendency, following a "slump," for production to strike a new high level of activity, instead of merely regaining the lost ground?
8. Name the "periods" of the business cycle in the order of their occurrence.
9. Give the characteristic features of each period of the business cycle.
10. What is the central idea of the "self-generating" theory of business cycles?
11. Explain the significance of the term "self-generating."
12. "Each period of the business cycle is the result of certain causes which have developed in the preceding periods of the cycle." What are these "causes"?
13. Why should "recovery" grow out of a business depression?
14. Would society be better off if business were stabilized? Why or why not?
15. Why is it probable that no single device will succeed in achieving stability?
16. What relationship is there between price stability and cyclical stability?
17. What is the principal value of a public works program in connection with the cycle?
18. How might the payment of unemployment benefits influence cyclical movements?
19. How should the funds to finance a public works program during a period of liquidation or depression be raised? Why?
20. When and from what sources should the funds with which to pay unemployment benefits be secured? Why?
21. Is it possible to secure stability through the direct control of production? Why or why not?
22. What characteristics of our present economic system tend to make cyclical fluctuations almost inevitable?
23. Distinguish between reform, relief, and recovery.
24. Describe the governmental attempts at (a) relief, (b) recovery, and (c) reform, since 1929.
25. What additional governmental powers might have contributed to the success of the recent recovery efforts?

26. Outline briefly the "Keynesian approach" to the problem of unemployment.
27. Explain the necessity for "offsets" to savings if depression is to be avoided.
28. What part might government play in the provision of full employment? Why should not some other agency perform this function?
29. Define "full employment."
30. Why did not extensive governmental spending in the post-1929 period bring a speedy end to the depression?
31. Do you feel that governmental spending, engaged in to provide full employment, would be better than giving unemployed workers a dole? Why or why not?
32. Do you regard the proposal of the Editors of *Fortune*, that "the government should underwrite permanent prosperity," sound and significant? Explain your answer.
33. What is the nature of the criticisms that have been leveled against the Keynesian program? Do they strike you as sound or unsound, and for what reasons?

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International Trade: Facts and Principles

IN DESCRIBING THE PROCESS OF EXCHANGE,¹ WE LOOKED BRIEFLY INTO THE nature of trade and found that, in the final analysis, it consists of an exchange of commodities and services for other commodities and services. Indeed, the true nature of trade is most easily seen in its simplest form, barter; and it is for this reason that the student of economics is urged in specific cases to disregard temporarily the money phenomena of modern exchange and concentrate upon what is often much more significant, namely, the goods phenomena.

Barter, the Essence of All Trade. In one phase of international trade—the phase that deals with making payment for goods imported and receiving payment for goods exported—the question of money is of considerable importance. But in international as in domestic trade, there is much to be gained in most instances by reducing the problem to its simplest terms. If, then, one thinks of trade, whether domestic or foreign, in terms of barter, there is small probability of being led astray by the intricacies of exchange as they appear in our highly complicated economic order.

Similarity of Domestic and Foreign Trade. Our study of trade within a single country has prepared us for an excursion into the field of international business transactions. For, although domestic and foreign trade are not precisely alike, their differences are less pronounced than their similarities. All trade, it will be recalled, is closely related to specialization, and consists of certain persons exchanging surpluses of economic goods for the surplus economic goods of others.

Moreover, in foreign as in domestic trade, the transaction (with few exceptions²) takes place between *individuals*, and not between political units *as such*. When Pennsylvania steel is sold in Florida and Florida oranges are sold in Pennsylvania, the trade is conducted between individuals or business houses within the two states, and not between the

¹ In chap. 31.

² As, for example, when the *government* of the United States provided the *government* of Great Britain with war supplies.

states themselves. In like manner, it is ordinarily the individual business men of Europe and South America, and not the governments themselves, that arrange for (let us say) shipments of coffee from Brazil to France, and of textiles and cutlery from England to Chile. When we speak, in later paragraphs, of the foreign trade of the United States or of some other country, it must be understood that the expression is one of convenience rather than exactness, and that it is used to indicate trade between individuals located in different countries and not between the governments of two or more countries.

Trade takes place, unless restricted artificially by a tariff or other obstacles, whenever buying and selling appear to business men to be advantageous. And foreign trade, like domestic trade, is advantageous whenever (as must always be the case in a free trade) each party to the transaction gives up something that he prizes less highly than that which, through the process of exchange, he receives for this item. Whether the exchange takes place between two or more residents of a small secluded village; or between business men of widely separated states, such as Maine and California; or between the citizens of different nations, the fundamental principles of trade are bound to apply.

Some Complicating Features of International Trade. In several respects, to be sure, international trade differs from domestic trade. There are differences in customs of the people, in language, in monetary units, and frequently in tariff regulations. These several items of difference have little or nothing to do with trade that is carried on within a single country, but they often have the effect of complicating trade transactions which go beyond national boundaries.

FOREIGN TRADE OF THE UNITED STATES

We may now give some little attention to the nature of the trade carried on between the people of the United States and those of other countries. In Table 43 are listed certain important transactions in the international trade of the United States for the year 1940.³ The sixteen items shown in this table give a fair notion of the transactions which enter into the foreign trade of this country. We shall examine these several items briefly.

1. **Merchandise.** Most people, in thinking of foreign trade, have in mind shipments of material goods. Though the significance of such goods in international trade is usually exaggerated by persons unfamiliar with the true situation, merchandise is indeed ordinarily the most important single item of American foreign trade. About 45 per cent of the export and 30 per cent of the import items of the United States consisted, in 1940, of merchandise. Some of the specific commodities of which these

³ The data for this pre-war year give a better picture of ordinary activities of international trade than would the highly abnormal data of the war or early post-war years.

TABLE 43. BALANCE OF INTERNATIONAL PAYMENTS OF THE UNITED STATES, 1940

(Source: United States Department of Commerce)

Classes of Transactions	Credits ^a Cash Claims Due U. S. from Foreigners (Millions of Dollars)	Debits ^a Cash Claims Due Foreigners from U. S. (Millions of Dollars)	Difference ("+" means balance due U. S.) (Millions of Dollars)
1. <i>Merchandise</i>			
We sold commodities amounting to.....	4021		
We bought commodities amounting to.....		2625	+1396
<i>Service Items</i>			
2. <i>Freight and shipping:</i>			
We received from foreigners for such services..	223		
We paid foreigners for such services.....		327	-104
3. <i>Tourist expenditures:</i>			
Foreign tourists spent in the United States..	81		
American tourists spent abroad.....		223	-142
4. <i>Immigrant remittances:</i>			
New immigrants brought into the United States.....	30		
Immigrants in the U. S. sent "back home"....		120	-90
5. <i>Interest and dividends on private investments:</i>			
We received from foreigners.....	525		
We paid to foreigners.....		215	+310
6. <i>Government transactions:</i>			
Foreign governments paid the United States..	28		
United States government paid foreigners....		122	-94
7. <i>Miscellaneous services:</i>			
We received from foreigners for such services..	164		
We paid foreigners for such services.....		66	+98
8. <i>Contributions:</i>			
We gave to foreign causes.....		55	-55
<i>Capital Movements</i>			
9. <i>Long-term investments:</i>			
Net balance.....		53	-53
10. <i>Changes in international banking accounts:</i>			
Net inflow of banking funds to United States..	873		+873
11. <i>Advance payments by British government</i>	720		+720
12. <i>Miscellaneous capital items</i>		170	-170
<i>Gold, Silver, and Paper Currency</i>			
13. <i>Gold:</i>			
Exports from United States.....	5		
Imports to United States.....		4749	-4744
Earmarking operations (net).....	645		+645
14. <i>Silver:</i>			
Exports from United States.....	4		
Imports to United States.....		59	-55
15. <i>Paper currency movements:</i>			
Net inflow to United States.....	33		+33
16. <i>Other transactions</i>	1432		+1432
	8784	8784	....

^a Credit transactions are those which may be expected to result in payments into the United States; debit transactions are those which will result in payments from the United States to foreign countries.

exports and imports were composed will be noted later. For the present, we may observe that such things as the sales of bunker coal and oil to foreign vessels, ship repairs, and several other items are included among the more usual types of merchandise. Much of the exports of the United States in 1940 consisted of war supplies or "strategic commodities" sent to the United Kingdom and other parts of the British Empire. It has been customary, in the past, to regard silver as an article of merchandise; but the increasing importance of silver shipments in American foreign trade in recent years has led to its being given a separate listing. Silver appears in our table under Item 14.

2. **Freight and Shipping.** Freight charges entering into foreign trade consist of items arising out of ocean, Great Lakes, and land transit. Ocean freight includes American merchandise carried in vessels owned by foreigners, and foreign goods transported in American bottoms. A foreign trade situation exists also in connection with traffic on the Great Lakes, in which commodities are moved from the United States to Canada, and vice versa. In addition to freight hauled by water, goods transported by rail sometimes enter into international trade. Great quantities of Canadian grain are carried by American railroads from the Great Lakes (usually from Buffalo) to the Atlantic seaboard. An even larger item is that charged by Canadian railways for carrying American lumber, grain, and packing-house products, which in many cases are reshipped from Vancouver or Montreal. Table 43 shows that, in 1940, we paid foreigners \$104,000,000 more for freight and shipping than we collected from them for this type of service.

3. **Tourist Expenditures.** Expenditures of tourists in foreign countries are also included in the international balance sheet. The expenditures of Americans traveling abroad appear as "debits," and those of foreigners in this country as "credits." It is estimated that in 1940 American tourists spent \$223,000,000 in foreign countries, as against \$81,000,000 spent by foreign tourists in the United States. This is 60 per cent less than was spent for similar purposes in 1937, and this reduction is attributable to uncertain world conditions which discouraged foreign travel in 1940. Departures from the United States to European and Mediterranean destinations fell from 135,000 in 1939 to 16,000 in 1940. "Canadian-American tourist traffic involves a larger total expenditure than that between any other two countries in the world,"⁴ but there were only 80 per cent as many United States visitors to Canada in 1940 as in 1939, and the number of Canadian visitors to the United States fell off almost 50 per cent. Americans, as is well known, do a great deal of traveling, a fact which may be explained in part by the large per capita income of the United States. Expenditures of foreign tourists in this country are ordinarily

⁴ United States Department of Commerce, *Trade Information Bulletin No. 625*, Washington, Government Printing Office, 1929, p. 11.

about one-quarter as great as those of American travelers in other parts of the world.

4. **Immigrant Remittances.** Many immigrants who have come to the United States during the past few decades have left behind them in their "old countries" relatives who are partly dependent upon them. From their earnings in this country (which are usually much larger than the incomes to which they have been accustomed in their native lands), these immigrants have frequently remitted considerable sums to their dependents. Remittances of this kind account for a "debit" item of \$120,000,000 in Table 43. The small offsetting item of \$30,000,000 appearing as a "credit" consists of cash brought into the United States by immigrants entering this country in 1940.

5. **Interest and Dividends on Private Investments.** When capital funds seek investment in foreign countries, they do so for the reason that investment opportunities abroad appear to be more advantageous than those at home. The investments are made, of course, with the idea of receiving an income from the securities that have been purchased, and this income forms an item of international trade. American private investments abroad have been placed chiefly in Latin America, Europe, and Canada. Interest on such investments amounted in 1940 to about \$525,000,000, and the foreign holders of American securities received, in that year, interest payments totaling \$215,000,000.

6. **Government Transactions.** We have already noted the fact that foreign trade is usually conducted between individuals and not between governments. But in some instances governments buy from other governments. Credits and debits of this kind in 1940 included (a) net receipts from Panama Canal operations, (b) expenditures abroad by the various executive departments, (c) remittances by the Veterans' Administration, and (d) cost of foreign representation in the United States and United States representation abroad.

Between 1923 and 1930, this country received more than \$200,000,000 annually as principal and interest payments on the huge sums borrowed by our allies in World War I. But payments of this kind declined steadily after 1930, and stopped entirely shortly after the beginning of World War II. In 1940, our government paid other governments \$94,000,000 more than it received from them.

7. **Miscellaneous Services.** Grouped under the heading "Miscellaneous services" are imports and exports of electric power; magazine and newspaper subscriptions; disbursements for advertising; cable, radio, and telephone services; royalties on motion pictures, and so on. In the case of miscellaneous items, as in other international transactions, there are both credits and debits. For the year 1940, as is shown in Table 43, transactions of this kind resulted in a net balance of \$98,000,000 due the people of the United States from foreigners.

8. **Contributions.** Total contributions made to foreign fields of activity by United States charitable, religious, educational, and scientific institutions during 1940 are estimated at \$55,000,000 on the basis of data submitted by 125 organizations.

9. **Long-Term Investments.** Citizens of the United States have made investments abroad for many years, and American securities have been bought by foreigners who, for one reason or another, have wanted to invest their funds in this country. Year by year these investments are increased through purchases of foreign bonds and stocks, or reduced by sales of such securities or by the payment of matured bonds. In 1940, the purchases of long-term foreign securities by Americans and the sales of American securities to foreigners resulted in a net balance of \$53,000,000 due the people of other nations.

10. **Changes in International Banking Accounts.** It is quite common for banks to have deposits with banking institutions of other countries, largely for the purpose of paying balances arising out of international trade. There has also been an extensive development of commercial short-term loans in foreign countries. A recent government statement showed that American deposits and short-term loans with foreigners amounted to \$137,000,000 at the end of 1940, while similar foreign deposits and loans in America reached the huge total of \$3,980,000,000. This represents a reversal of the situation that existed in 1933, when the figures were, respectively, \$1,082,000,000 and \$487,000,000. The net change in America's international deposits and short-term loans for the year 1940 was \$873,000,000.

The flow of short-term funds from foreign countries to the United States, during the past decade, has been in part the return from foreign money markets of American-owned banking funds, and in part a flight of foreign capital to the United States which was stimulated by political and financial uncertainties in Europe and elsewhere. This inflow of funds affected the trade balance in recent years in exactly the same way as though merchandise to this amount had been sent out of the United States.

11. **Advance Payments by the British Government.** In order to facilitate the production and purchase of war supplies in the United States, Great Britain (and also France) made some payments considerably in advance of the export of goods and provided capital assistance to certain producers where new plant facilities were needed. This item of \$720,000,000 represents payments of these kinds.

12. **Miscellaneous Capital Items.** The United States Department of Commerce includes under this heading certain capital items which are not explained in detail.

13. **Gold.** Gold is shipped from country to country for use in the arts, to settle the balances of international indebtedness (as will be explained in the following chapter), and to serve as reserves in the vaults of cen-

tral banks of various countries. In some cases the central banks are allowed to retain their holdings of gold abroad, and yet have such gold count as reserves if it is segregated and marked in such manner as to indicate that the identical coins or bars "earmarked" are the bank's property, and altogether subject to its disposal. It is not the practice of the Federal Reserve banks to count as reserve any gold held abroad; but when they have come into possession of gold abroad at a time when they held ample gold at home, they have sometimes had it earmarked there, largely in order to save the expense of shipping to the United States gold that might later require reshipment. Earmarked gold belonging to an American bank but held temporarily in a foreign bank is set aside to await instructions from the American bank, and cannot of course be used except upon specific order from the bank that owns it.

After the Munich conference of September, 1938, the flow of gold to the United States was greatly accelerated. In 1939 and 1940, the net gold imports to this country exceeded the gross merchandise exports—a situation without precedent in the history of the United States. Transactions in gold, including foreign shipments and earmarking, resulted in 1940 in a net "debit" of \$4,099,000,000. Gold exports amounted to only \$5,000,000, net earmarkings equivalent to exports of \$645,000,000 took place, and gold imports totaled \$4,749,000,000. This tremendous importation of gold, which established a new high record for gold shipments to the United States, was influenced largely by political and economic unsettlement throughout the world. Most of this gold came from the British Empire. "Shipments have been greatly in excess of production for several years," observed the Department of Commerce. "There is good reason to believe that many of the principal gold stocks have already been transferred for the most part to the United States."

14. **Silver.** Influenced greatly by United States Treasury purchases, in accordance with the provisions of the Silver Purchase Act of 1934, we imported \$355,000,000 worth of silver in 1935, \$183,000,000 worth in 1936, and \$92,000,000 worth in 1937. In 1940, we imported only \$59,000,000 worth of silver, the lowest imports of this kind since the Silver Purchase Act went into effect. Since we exported \$4,000,000 worth of silver in 1940, we had a net "debit" balance of \$55,000,000 on this item for that year.

15. **Paper Currency Movements.** There is ordinarily found, in every important country, a considerable amount of the paper currency of other important countries. In 1940, a good deal of American paper money which had been abroad was shipped back to this country. Deducting from such receipts the shipments of foreign paper currency out of this country to the countries of issue, we had a net "credit" of about \$33,000,000, which affected the balance sheet as it would have been affected by a shipment of merchandise from the United States.

16. **Other Transactions.** This is a residuum, made up largely of special items which it is not feasible to show separately.

Foreign Trade in Prosperity and Mild Depression. Since 1940 was a year of moderate business depression, the figures in Table 43 are lower than they would be if we had chosen a year of prosperity, say 1928. For in 1928 the total "credits" (and therefore the total "debits") on the international balance sheet amounted to \$10,559,000,000. Hence, the foreign trade of the United States in 1940 was only about 83 per cent as great as in 1928. We shall not undertake to examine here the 1928 figures item by item, but we may note the fact that American exports of merchandise in that year totaled \$5,334,000,000, and American imports of merchandise \$4,497,000,000. This means that exports and imports of merchandise in 1940 were, *in terms of dollars*, approximately 75 and 58 per cent, respectively, as important as in 1928. However, since the price level was slightly lower in 1940 than in 1928, the decline in actual *volume of commodities* was somewhat less than the decline indicated by a comparison of the total value of merchandise exports and imports for these two years.

AMERICAN EXPORTS AND IMPORTS OF MERCHANDISE

In 1940, 45 per cent of the export items of the United States, and 30 per cent of the import items, consisted of merchandise, as is shown in Table 43. Twelve years earlier, in 1928, when world trade was being transacted on a more extensive scale, these percentages were 50 for exports and 40 for imports.

We turn now to the consideration of some of the most important articles of merchandise that enter into American foreign trade. In Tables 44 and 45 are listed, respectively, the principal commodities exported and imported by the people of the United States. Two columns of figures are given in each table, the first being a five-year average for 1923-27, and the second for 1940. The five-year average represents more nearly "normal" conditions than do the 1940 figures, since the half-decade that has been chosen includes both "good" and "bad" years, from the business point of view, whereas 1940 was less good than average but was marked by unusually large exports of equipment for use in war.

Merchandise Exported from the United States. Of the fifteen items that appear in Table 44, five are of special interest because of their large contribution to the volume of total exports of this country. Heading the 1923-27 list is cotton, a commodity in the production of which the United States leads the world. Our five-year average gives to cotton an annual export value of about \$900,000,000, but in some years the figure has been above a billion dollars. However, our cotton sales in the world market are meeting increasingly stiff competition from other cotton-

producing countries, and will probably never regain their past preeminence. Japan was our best pre-war customer in the purchase of cotton, with England running a fairly close second.

Next in importance in the five-year average are petroleum and petroleum products (such as gasoline, kerosene, and lubricating oils), which we often export to the extent of approximately a half-billion dollars' worth a year. The export item third in rank, judged by value of product, is machinery of all kinds, including agricultural and industrial implements, office appliances, printing machinery, and so on, with values approximating \$360,000,000. Next in importance are automobiles, and automobile engines and parts. This item is one of increasing significance. Though the average for the five-year period was only \$281,000,000, there had been

TABLE 44. VALUE OF PRINCIPAL COMMODITIES EXPORTED FROM THE UNITED STATES
(Source: *Monthly Summary of Foreign Commerce of the United States*, December, 1940)

Classification	Value in Thousands of Dollars	
	Five-year Average, 1923-1927	1940
1. Cotton, raw.....	891,634	209,231
2. Petroleum and petroleum products.....	464,313	310,184
3. Machinery, all classes.....	359,491	665,428
4. Automobiles, including engines and parts.....	281,515	641,184
5. Wheat, including flour.....	275,291	34,106
6. Iron and steel products.....	159,237	588,953
7. Tobacco, unmanufactured.....	149,588	44,045
8. Copper and copper manufactures.....	147,690	155,000
9. Animal fats and oils.....	144,089	13,065
10. Coal and coke.....	140,517	92,254
11. Cotton manufactures.....	135,113	60,300
12. Meats.....	108,725	21,745
13. Sawmill products.....	101,997	36,781
14. Fruits and nuts.....	100,355	34,411
15. Rubber and rubber manufactures.....	51,163	44,410

a steady advance in the exports of automobiles for several years prior to the depression that began in 1929. The figure for 1927, for example, was \$388,000,000. The 1940 exports of machinery and automobiles were almost double the five-year average, because of extensive war-time orders. This is the explanation, also, of the large exports of iron and steel which, in 1940, were approximately four times as great as the average in 1923-27.

The last item of exports which we shall note specifically consists of wheat and flour, which in some years have brought to American exporters payments totaling slightly more than \$400,000,000, and in other years somewhat less than that amount. The United States has been a

consistent exporter of wheat, for the country produces regularly more foodstuff of this kind than can be disposed of in the home market. However, the wartime effort of other countries to make themselves more largely self-sufficient in the production of foodstuffs reduced substantially the quantity of wheat purchased from the United States by foreigners. The extremely low export of wheat in 1940 reflects this effort. Post-war shortages of grain in Europe and elsewhere brought our exports of wheat above the pre-war figures.

Our exports of petroleum are made possible, of course, primarily because important oil fields are located within our national boundaries. We are fortunate, likewise, in having land and climatic conditions favorable to the growth of certain agricultural crops. The suitability of the South for cotton production, and almost ideal conditions for the growing of wheat in the Middle West and North West, enable us to raise these crops so advantageously that it pays to produce both cotton and wheat for export. In machinery and automobiles we have commodities that are manufactured on the basis of large-scale production. This is a field of manufacture in which American enterprisers excel; and here, as in the items mentioned above, production is carried on so advantageously that it is profitable to produce not only for the domestic market but for foreign markets as well.

Merchandise Imported by the United States. In Table 45 the first four items have stood out in most years as exceptionally important from the point of view of import values. The cotton goods manufacturers of England look to the United States for the bulk of their raw material, and the silk manufacturers of this country have depended upon producers in other countries for the raw silk from which to spin and weave silk cloth. So great was the demand of American manufacturers for raw silk, that average annual silk imports totaled, in 1923-27, almost \$400,000,000 in value. But the encroachment of rayon upon real silk is indicated by the steadily declining imports of raw silk into this country; and, of course, our entry into World War II put a stop to our imports from Japan, which was formerly the source of most of our raw silk. Another important raw material for which we have depended almost wholly upon other countries is crude rubber. Owing largely to our enormous output of automobiles and motor trucks, and the consequent demand for rubber tires, we have often imported annually from the Malay Peninsula more than \$300,000,000 worth of crude rubber, which is here manufactured into rubber products. In one exceptional year (1926) our imports of rubber amounted to \$500,000,000. Japanese military activities in Malaya in early 1942 put an end to trade with this great rubber-producing region; and the development of synthetic rubber in the United States indicates that we shall never again depend so extensively as in the past upon imports of natural rubber, but shall use increasingly large quantities of synthetic rubber for many purposes.

We produce in the United States a part of the sugar required by our people, but the bulk of this commodity is imported from Cuba. Our average annual imports of sugar in "good times" amount to some \$300,000,000. Most of the imported sugar comes to us in the raw or unrefined state, and is subjected to manufacturing processes in American sugar refineries. Coffee, of course, is an article which we do not attempt to

TABLE 45. VALUE OF PRINCIPAL COMMODITIES IMPORTED INTO THE UNITED STATES
(Source: *Monthly Summary of Foreign Commerce of the United States*, December, 1940)

Classification	Value in Thousands of Dollars	
	Five-year Average, 1923-1927	1940
1. Silk, raw.....	379,980	125,997
2. Rubber, crude.....	326,935	303,118
3. Sugar, cane.....	296,090	127,309
4. Coffee.....	262,463	126,808
5. Paper and paper manufactures.....	128,279	132,618
6. Wool and mohair.....	110,894	84,604
7. Furs and fur manufactures.....	108,804	73,662
8. Petroleum and products.....	105,151	70,110
9. Hides and skins.....	100,078	50,188
10. Copper, ore and manufactures.....	92,239	73,492
11. Tin, including ore.....	86,685	130,981
12. Wood pulp.....	81,879	75,414
13. Fruits and nuts.....	80,745	46,997
14. Cotton manufactures.....	80,739	28,747
15. Sawmill products.....	74,459	24,177
16. Wool manufactures.....	72,354	25,161
17. Burlaps.....	72,176	45,476
18. Vegetable oils and fats.....	71,411	55,838
19. Tobacco, unmanufactured.....	69,834	36,722
20. Fertilizers.....	67,319	27,207

grow in the United States. Instead, we import our coffee from South America (chiefly from Brazil and Colombia), and we pay to foreigners for this commodity a little more than a quarter of a billion dollars annually in years of prosperity.

Raw Materials vs. Manufactures. Without dealing further with individual items of international trade, we may make the general observation that American exports consist in the main of manufactured goods, and American imports are made up rather largely of raw materials. There are, to be sure, some considerable exceptions to this statement. But the generalization is sufficiently true of present conditions, and it has special significance as indicating a definite trend. At present, approximately 65 per cent of our commodity exports consist of goods partly or wholly manufactured, as against 40 per cent in 1880; and whereas in 1880 we imported only about 20 per cent of our raw materials used in manufactur-

ing, today we import approximately 35 per cent of such materials. We see here an illustration of the well-known fact that America is becoming more distinctively industrial and less distinctively agricultural.

Direction of American Foreign Trade. Before quitting the subject of American exports and imports of merchandise, we may note briefly the sources of the imports into this country and the destinations of our exported commodities.

Table 46 gives an idea of the direction of American international trade on the basis of continental divisions. The figures here given are for 1940. To Europe went 41 per cent of our commodity exports in that year, including cotton and other raw materials, foodstuffs, machinery, automo-

TABLE 46. PERCENTAGE DISTRIBUTION OF UNITED STATES
EXPORTS AND IMPORTS, BY CONTINENTS, 1940

(Source: *Monthly Summary of Foreign Commerce of the United States*, December, 1940)

	Percentage of Total Exports	Percentage of Total Imports
Northern North America.....	18.0	16.6
Southern North America.....	8.5	9.7
South America.....	10.8	15.0
Europe.....	40.9	14.8
Asia.....	15.4	37.7
Oceania.....	2.4	1.3
Africa.....	4.0	4.9

biles, and so on. Economically, Europe is essentially a manufacturing region, and yet Europeans normally buy a large quantity of American manufactures, which are attractive because of high quality and low prices. Manufactured goods make up about one-half of our usual exports to Europe, the other half consisting of raw materials.

About 26 per cent of our exports in 1940 were sold to our neighbors in North America. Two-thirds of these commodities were manufactured goods. Asia, our next best customer, took almost 50 per cent more of our goods than South America, our third best. Nearly 60 per cent of our sales to Asia were of manufactured goods, while "semi-manufactures and finished manufactures" made up about 95 per cent of the goods exported to South America, Oceania, and Africa.

In imports, Asia headed the list in 1940, sending us nearly 38 per cent of all commodities brought into this country. Fifty-five per cent of these goods were raw materials, of which rubber was the most important single item. Europe ordinarily comes second in sending merchandise to the United States, but World War II so greatly reduced our 1940 imports

from Europe that North America (with 26 per cent) and South America (with 15 per cent) took second and third places, respectively, in that year. Three-fourths of the goods usually bought in Europe by Americans are manufactures, a fact which attests the industrial activity of that continent. United States imports from North America are chiefly from Canada, Cuba, and Mexico. Three-fourths of these purchases are of manufactured goods. The imports from South America, on the other hand, consist of raw materials to the extent of four-fifths of the total. Coffee from Brazil and Colombia, wool from Argentina, and nitrates from Chile account for the bulk of these imports. Oceania and Africa are relatively unimportant in the matter of exports from and imports to the United States.

GAINS THROUGH INTERNATIONAL TRADE

Trade, as we have so often said, consists of the exchange of surpluses that arise from the practice of specialization. International trade is the result of geographical or territorial specialization. It is specialization pushed beyond national boundaries. Nowhere are the benefits of specialization more clearly seen than in foreign trade. This is particularly true in the case of certain materials which depend upon favorable climatic conditions if they are to be produced with small effort. Sugar, coffee, cotton, rubber, and several other commodities fall within this group. Since they may be grown with slight expenditure of capital and labor in some parts of the world, but in other regions only at great cost, if indeed at all, it is obviously advantageous to resort to specialization and exchange in the production of such goods.

Success in Relation to Natural Endowments. It is generally recognized that success is most likely to attend the efforts of the individual who engages in the type of work for which he is best fitted by nature. Fred Allen and Bob Hope have probably achieved greater success than they could have hoped for in academic circles; and, in like manner, our college professors doubtless do well to confine their efforts to things academic rather than to venture into the field of comedy. It is equally true that a nation is most likely to prosper economically if it applies its energies to the type, or types, of production in which it is able to engage most efficiently.

Two Important Advantages of Foreign Trade. In dealing with the benefits of international trade we shall speak from the American point of view, though the choice of country makes no difference, of course, in the principles involved. In general, the people of the United States gain through foreign trade in that they are enabled, by reason of this trade, first, to enjoy some goods of which they would otherwise be deprived; and, second, to secure other commodities at lower prices (or

at least to *greater advantage*) than if the goods were produced in this country.

The Enjoyment of Exotic Products. The first of these gains is fairly apparent. It is true that bananas, coffee, and the like might possibly be grown in the United States under glass. But we know that, without any question, production carried on under such conditions would be highly disadvantageous and would result in prices so excessively high that they could not be paid by the average citizen. Consequently, we are justified in saying that international trade brings to us certain goods which, in the absence of such trade, we should not be able, as a people, to procure.

The Principle of Comparative Costs. The second gain noted above is somewhat less obvious; and yet a tremendous amount of foreign trade is carried on, not because in its absence a country would be compelled to get along without desirable goods, but rather for the reason that, in the output of an article that could be produced in two countries, it is often advantageous for one country to defer to the other. That is, the country that is less favorably equipped for a special kind of production yields to the country that is particularly well prepared to turn out the goods in question. This latter country thus specializes in making the article, producing enough not only for itself but for the other country as well, with the result that both benefit by the arrangement.

Absolute Advantage. This principle, which is known as the principle of comparative costs, is readily understood when the advantage is *absolute*, but it is more difficult to see in a case of *comparative* advantage. It is clear, for example, that it would be wise for the experienced banker to concentrate upon the problems of banking, and for his stenographer to specialize in typing and similar work. The point is that each is, in his or her particular field of endeavor, more skillful than the other; and it would be wasteful for the stenographer to take a turn at money and credit while the banker pounded the typewriter. The latter is more productive when specializing in money matters than in the rôle of typist; and the stenographer is more productive in her field of specialization than in determining upon the placing or calling of loans.

By the same token, Brazil is more effective than the United States in the growing of coffee, and this country is more productive than Brazil in the manufacture of farming implements. In this instance, it is said that Brazil has an absolute advantage in the production of coffee, and the United States an absolute advantage in the production of farm machinery. In cases of this kind, it is clearly the part of wisdom for these countries to engage in foreign trade, so that the United States may get her supply of coffee, and Brazil her farming implements, at lower prices than would prevail if the two nations attempted to practice self-sufficiency.

Comparative Advantage. But (reverting to our former illustration) let us suppose that the banker is himself an expert typist and is able to

operate the typewriter so skillfully as to exceed the speed of his stenographer. In this instance, he would have an *absolute advantage* in both banking and typing. Should he, then, undertake to act as his own typist, or should he allow his stenographer, who is a less skillful typist than he, to write his letters and other papers? The common-sense answer is that the typing should be delegated to the stenographer; for, though the banker is more productive than the stenographer in both banking and typing, yet he is more productive as a banker than as a typist. Therefore, it will pay him better to concentrate upon banking and allow another to do his typing. Because of the specialization of the banker in the field which is for him most productive (namely, finance), the stenographer is said to have a *comparative advantage* in typing.

Consequences of Comparative Advantage. We find that a great deal of international trade depends upon advantages of this latter type. So fortunate is the United States in the matter of natural resources, efficient management, and competent labor, that it is able to produce a great many commodities at an absolute advantage. But its advantage in the production of a limited number of articles is so great that in some instances it willingly surrenders absolute advantage in one form of production in order to embrace more fully a still greater absolute advantage in another.

These items that are neglected by us are then produced at a comparative advantage by other countries, which are thus able to engage in trade with the United States; and both countries gain in the process. It is claimed, for example, that we could produce flax quite as advantageously as any country in the world. But our facilities for growing other agricultural crops are so pronounced (and so superior to our advantages for the raising of flax), that, so far as agriculture goes, we have usually specialized in cotton, wheat, and other farm products, and imported our flax from Russia and Belgium.

Effectiveness of Productive Effort. Whether the advantage enjoyed by a nation is "absolute" or "comparative" does not matter particularly. The important thing is that the people of a country should, from the economic point of view, always engage in those types of production in which their efforts will be employed most effectively. In some economic activities, the laborers of one country may be much more productive than those of another. In the mining of coal, for example, the coal workers of the United States are much more productive than the coal workers of England. It does not follow from this fact that no coal should be mined in England; but if there are other industries in which England has an absolute advantage over the United States, or in which she suffers a smaller disadvantage (enjoying, therefore, a comparative advantage), Englishmen would do well to concentrate upon these industries and leave the mining of coal to the laborers of the United States.

Some Reasons for Productive Superiority. In suggesting that labor is more productive in some countries than in others, a word of caution is necessary. The expression is not used with the thought of implying that this superiority results from greater industry or skill on the part of the workers, though this might, indeed, be the case. But it is probable that the greater productivity comes more often from conditions other than the workers' greater skill and aggressiveness. In the case of coal mining cited above, the American worker produces more than twice as much per day as the British worker. But if the American miner were put to work in British mines, it is likely that his productive superiority would immediately disappear. For this superiority is due chiefly, and perhaps wholly, to the greater thickness and accessibility of coal seams in the American mines and to the employment of more mining machinery here than in Great Britain. Advantages, "absolute" or "comparative," do sometimes result from exceptional intelligence and skill on the part of labor. But probably more often they are attributable to natural resources or climatic conditions, to the great abundance of capital of modern types, to exceptionally able management, or to a combination of several of these factors.

The gains of foreign trade, then, are similar to the gains of domestic trade. Through geographical specialization, as through individual specialization, the total product is increased. By creating and exchanging surpluses of specialized goods, individuals are enabled to secure more commodities and services than would be available without specialization. If this is true of individuals within a country, it is equally true of individuals in different countries; and foreign trade, as was pointed out at the beginning of the chapter, is almost wholly trade between individuals and not between nations.

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1. In what respects are domestic trade and foreign trade similar? In what respects are they dissimilar?
 2. Does the expression, "the foreign trade of the United States," refer to trade of this government with other governments?
 3. What was the total amount of foreign trade (expressed in dollars) of the United States in 1940, as shown in Table 43?
 4. What part of our total foreign trade consists of merchandise transactions?
 5. Which are greater, our exports or imports of merchandise?
 6. Why should gold be shipped from country to country? How does "earmarking" lessen the amount shipped?
 7. How do you explain the fact that the American item of "tourist expenditures" is much larger than the item indicating foreigners' tourist expenditures in this country?
 8. Name the five principal exports of the United States, giving some idea of the value of each.

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9. What is there about our productive abilities that makes it possible for us to export these five items in large quantities? Examine each item separately in answering this question.
10. Name the four principal imports of the United States, giving some idea of the value of each.
11. From what regions do these four commodities come? Would you classify them as "raw materials" or "manufactured goods"?
12. It is said that the United States is becoming more distinctively industrial and less distinctively agricultural. Illustrate with items entering into foreign trade.
13. Upon what geographical regions are we chiefly dependent for our imports?
14. What geographical regions are the leading purchasers of American exports?
15. What is the relationship between international trade and specialization?
16. What are the two great advantages of foreign trade?
17. "In the output of an article that could be produced in two countries, it is often advantageous for one country to defer to the other." Why?
18. Give an example of "absolute advantage" as it may be seen in production by two countries.
19. Give an example of "comparative advantage."
20. In the manufacture of many kinds of goods, American workers are "more productive" than the workers of other countries. Why?

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The Settlement of International Obligations

FOREIGN EXCHANGE

WE TURN NOW TO ONE OF THE COMPLICATIONS OF INTERNATIONAL TRADE which has to do with making payment for goods imported and receiving payment for goods exported. The difficulty in effecting these payments arises partly from differences in the monetary units used in two countries—but it is also due, in part, to the distances involved.

Payments in Long-Distance Trade. The first of these items does not, of course, affect domestic trade. But the second may prove to be something of a problem within a country of great size. In trade between Massachusetts and California, for example, there is the necessity of making and receiving payment. If a Boston shoe manufacturer sells his product to a San Francisco merchant, he probably receives in payment a check payable at a San Francisco bank. This check he deposits in his own bank in Boston, but the Boston bank must in some way collect from the bank in San Francisco. Prior to the introduction of the Federal Reserve System, a charge was made for this service, theoretically to cover the cost of gold shipment from California to Massachusetts and loss of interest during the period of transport, though in reality the actual gold was seldom transferred. Check collections of this kind are now made without charge, through the Federal Reserve banks, by means of the gold settlement fund (which was described in Chapter 33), so that the payment of long-distance domestic obligations no longer constitutes a real problem.

Gold as International Money. In international trade some of the difficulties due to differences in monetary units have been disposed of in normal times by expressing international obligations in terms of gold. Though British paper money would not be acceptable to an American exporter of cotton since it could not be used in ordinary business transactions in this country, gold to the proper amount is quite welcome, because it can be converted readily, and without loss, into American dollars upon application to the United States Mint. In like manner, American gold is acceptable in foreign countries operating on a gold standard. What we

are saying, then, is that gold, because of its desirability as a commodity, is generally acceptable and serves as money practically throughout the world.

Avoidance of Gold Shipments. It would be highly undesirable, however, to make payment for all international transactions in actual gold. An arrangement of this kind would have meant in 1940 the shipment of about \$17,500,000,000 worth of gold to take care of the trade transactions between the United States and other countries, as may be seen by examining Table 43. In 1929, when foreign trade was greater than in 1940, the figure would have been some \$21,000,000,000. Fortunately, there is no need to make such huge shipments, for in foreign trade, as in domestic trade, business transactions tend to offset one another. It is a truism in international trade that, over a long period of years, a country cannot sell goods unless it will buy; that is, it cannot hope to engage in export trade unless it is willing also to import goods from other countries. This is a matter into which we shall inquire shortly.

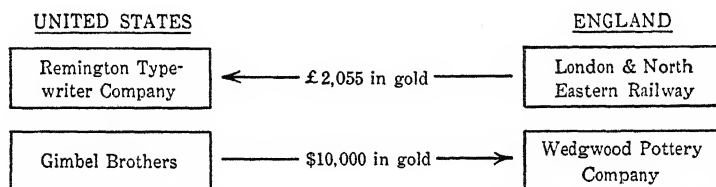


FIG. 43. SETTLEMENT OF INTERNATIONAL OBLIGATIONS BY GOLD SHIPMENTS

Economy in the Use of Gold. Table 43 shows that in 1940 the foreign trade of the United States consisted of exports and imports amounting to some \$17,500,000,000. Of this amount, gold movements came to \$4,754,000,000, or 27 per cent of the total. We have seen that this was a highly abnormal year in the matter of gold shipments, since foreigners sent large quantities of gold to the United States in the interests of safety. Hence, we shall understand better the rôle played by gold in international trade if we consider a year of both peace and prosperity. In 1928, for example, less than \$1,000,000,000 worth of gold changed hands in carrying out \$21,000,000,000 worth of international business transactions. The reason so huge a volume of trade can be transacted with so slight a movement of gold is that, just as in the clearing houses of our banking system, claims are set over against claims, debits against credits, and thus most obligations are canceled without necessitating the shipment of gold.

The general principle involved in the cancellation of debits and credits arising in international trade may be made clear through a very simple illustration. Let us suppose England and the United States to be on the gold standard, as they were prior to 1931, with no governmental restrictions upon the shipment of gold. Now if, under these conditions, the Remington Typewriter Company sells \$10,000 worth of typewriters to

the London and North Eastern Railway, and at about the same time the Wedgwood Pottery Company ships a £2055 order of china to Gimbel Brothers of New York, there are several possible ways of settling these obligations. With our assumption of £1 sterling being equal to \$4.87, as in 1931, the value of the shipment of typewriters would equal exactly the value of the shipment of china. Hence, the shipments of goods might be paid for by the shipment of gold, as shown in Fig. 43.

The Cancellation of International Obligations. But it is troublesome and costly to ship gold to England from the United States, and to the United States from England. We may be sure that these importers, whose problem it is to effect payment, would try to avoid an actual transfer of gold. This would be fairly easy if all four parties concerned were acquainted with one another and knew of the sales that had taken place.

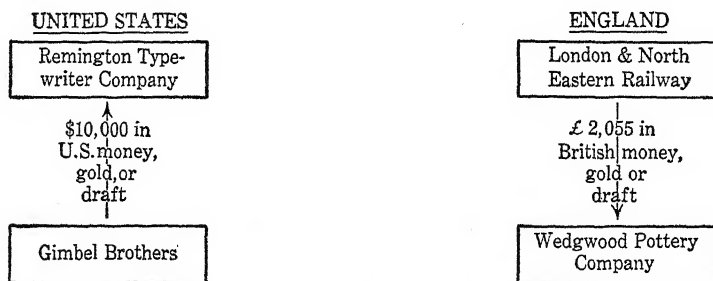


FIG. 44. SETTLEMENT OF INTERNATIONAL OBLIGATIONS BY CANCELLATION

In such event it could easily be arranged that Gimbel Brothers should pay \$10,000 to the Remington Typewriter Company, and the London and North Eastern Railway Company a like sum in British money (£2055) to the Wedgwood Pottery Company. Through a canceling-out process of this kind both obligations could be met without the use of gold. The transaction would be as in Fig. 44.

This is, fundamentally, the financial transaction that takes place in the settlement of obligations arising in foreign trade, but the process is not quite so simple as it appears above. Our illustration is based upon two assumptions that we cannot make with safety, in addition to the hypothesis that there is no governmental restriction to the free shipment of gold between these two countries. The first is that the parties engaging in international trade know of each other's business dealings with foreigners; and this is certainly a far-fetched notion, in view of the large number of persons engaging in such trade. The second assumption, that transactions of exactly equal amounts (in the present case, of \$10,000 each) can be located and canceled out, is likewise not warranted.

The Use of "Foreign Exchange." For these and other reasons, there has come into existence a class of middlemen who are bankers or private

dealers in "foreign exchange" (the name given to foreign drafts or bills of exchange). The introduction of these bankers into the situation removes the difficulties we have just described. Their presence in the field makes it unnecessary for exporters and importers to know one another, for these bankers provide a recognized market in which exporters can sell their claims against foreigners, and importers can purchase bills of exchange with which to pay obligations due foreign exporters. There is the further fact that these dealers in foreign exchange, like commercial bankers, exchange bank credit for personal credit, and thus render it more generally acceptable.

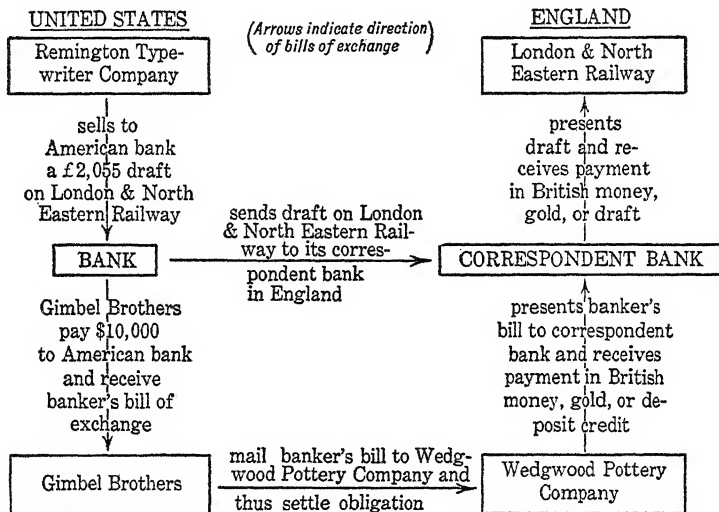


FIG. 45. THE USE OF "FOREIGN EXCHANGE"

The entrance of the banker into the picture gives us a situation such as is shown in Fig. 45. The Remington Typewriter Company, wishing to secure payment at once, sells to a New York bank (dealing in foreign exchange) a draft or commercial bill ordering the London and North Eastern Railway to pay the Remington Typewriter Company £2055, or its equivalent in gold. This sale of the endorsed draft gives the Remington Typewriter Company immediate possession of the \$10,000 due this concern; and the bank proceeds to collect the draft by sending it to a correspondent bank in London, which in turn presents it to the London and North Eastern Railway Company and receives payment in British money. Gimbel Brothers, on the other hand, buy from the bank a banker's bill of exchange for £2055, which it forwards to the Wedgwood Pottery Company; and this concern, by presenting the bill at the correspondent bank, secures payment for the shipment of china to the Gimbel store. Here, again, all claims have been settled without transfer of gold overseas.

"Foreign Balances" of Dealers in Exchange. We may bring our illustration closer to reality by multiplying instances. It must be understood that not only the Remington Typewriter Company, but thousands of other American exporters, are selling to the American bank claims upon English importers. The bank, by sending the purchased drafts to its correspondent bank in London, builds up in the London organization a large balance which is held subject to the order of the American bank. But, also, the American bank is constantly selling banker's bills (such as that purchased by Gimbel Brothers) which before long are presented for payment at the correspondent bank; and these payments bring about a steady reduction in the balance that is being built up in the manner described above. It must be remembered, of course, that there are many banks dealing in foreign exchange, and many correspondent banks in foreign countries, instead of only the one of each that enters into our example.

In the payments described above, the American concerns took the initiative in both instances; that is to say, the Remington Typewriter Company "drew" on the London and North Eastern Railway, and Gimbel Brothers bought a bill of exchange with which to pay their indebtedness to the Wedgwood Pottery Company. It should be obvious, however, that the British companies might have made the first move, the Wedgwood Pottery Company selling to the London bank a draft on Gimbel Brothers, and the London and North Eastern Railway purchasing from this bank a banker's bill of exchange with which to remit to the Remington Typewriter Company. There is no universal practice in the matter; in some instances the exporter will "draw" and in other cases the importer will take the initiative and settle the account by forwarding a bill of exchange. Whether one method or the other is employed depends upon the terms of the business transaction between exporter and importer.

It would be possible, of course, for importers always to meet their obligations through the purchase of banker's bills, thus obviating the use of commercial bills such as that employed in the transaction between the Remington Typewriter Company and the London and North Eastern Railway. The effect is the same whichever method is adopted. In every instance importers pay funds into banks of their respective countries, and exporters draw funds from banks, the exporters by selling claims upon foreign concerns and the importers by buying claims. If, then, the value of all goods exported from the United States to England is exactly equal to the value of goods imported from that country to the United States, American importers will pay into American banks handling foreign exchange, precisely the amount which American exporters will draw out. Likewise, the payments of English importers to British dealers in exchange will equal the withdrawals by English exporters. Under these

conditions, all payments necessitated by reason of foreign trade may easily be made without shipment of gold.

"Triangular Exchange." The settlement of international indebtedness is often a much more complicated matter than is suggested by the simple processes that we have described. We have referred, for example, to the fact that a country's imports are paid for, in the main, by its exports. But in the case of two countries, one may export to the other considerably more goods than it imports from that country. It would seem, in a case of this kind, that a great deal of gold would have to be transferred in order to make up the balance; and, of course, transfers of gold do take place. There are ways, however, to avoid the actual shipment of gold in many instances. An example of "triangular," or "three-cornered," exchange will illustrate this point.

There are some countries from which the United States imports a large quantity of goods, but to which it sends but few goods in return. We have already seen that in normal times we buy large quantities of silk from Japan, coffee from Brazil and Colombia, and rubber from the Malay Peninsula. In instances such as these (and especially when the import consists of raw materials from a rather primitive country), our imports from individual countries exceed our exports to these countries. On the other hand, we export to certain countries (as, for example, to England) more than we import from these specific countries. If we add to these facts the assumption that England exports to one of these countries (say, to Colombia) more than she imports, we have conditions such as form the basis of triangular exchange and make it possible to effect settlements without the use of gold.

Since American imports from Colombia materially exceed our exports to that country, while our exports to England are greater than our imports, there should be available in New York an abundance of London exchange, but little or no opportunity there to buy bills of exchange payable in Colombia. How, then, shall American importers settle their accounts in Colombia? And how shall English importers pay bills due manufacturers and merchants in the United States for shipments from America to England? The problem is solved by American importers purchasing, in New York, London exchange which can be used for the settlement of debts in Colombia. For London is a world clearing house for foreign exchange, and exchange drawn on a London bank is acceptable in virtually any part of the world. This London exchange originates through American exporters drawing on English importers and then selling these drafts to New York dealers in exchange. Therefore, American importers can pay for goods imported from Colombia by sending to Colombian business men the London bills that they have bought in New York.

The bills can then be sold by these Colombian exporters to other per-

sons in their country, who in turn have imported goods from England and are anxious to have drafts on London with which to meet their obligations. When the Colombian importers have settled their accounts with English exporters in this way, the exporters present the drafts for collection to the English importers of American goods (upon whom they were originally drawn), and when they are paid all obligations have been met. The several steps in the process are illustrated in Fig. 46, in which the arrows indicate the direction in which the drafts move, the goods moving, of course, in the opposite direction.

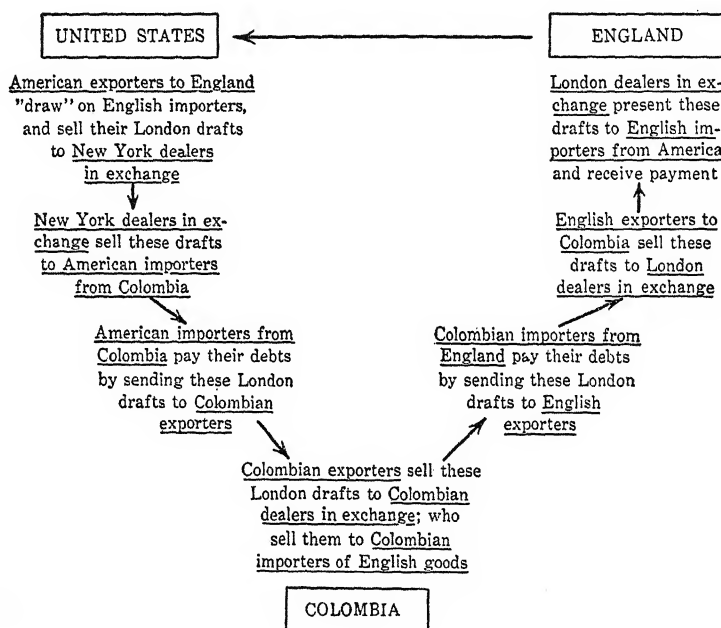


FIG. 46. AN EXAMPLE OF "TRIANGULAR EXCHANGE"

The Rate of Exchange. Naturally, the bankers handling foreign exchange make a charge for the accommodation; but this charge is paid willingly enough, since the use of foreign exchange makes it unnecessary to send gold overseas in settlement of indebtedness. The monetary unit of the United States is the dollar, and of England the pound sterling. Americans, of course, wish to be paid in either dollars or gold, and Englishmen in either pounds or gold. There is no difficulty about this, however, since the English exporter is in reality paid by the London bank in money which this bank has received from English importers. It is therefore British money, or pounds sterling. A similar situation exists in the United States, for American exporters receive from their banks American dollars that have been paid in by American importers who require

banker's bills with which to settle foreign obligations. This is true so long as exports and imports between two countries are equal.

There are times, however, when exports from the United States to England are either greater or less than imports from England. Let us suppose, for the moment, that they are greater. This means that American exporters are drawing from American banks more than American importers are paying in. In England, the situation is reversed; British importers, through their purchase of bills of exchange with which to pay obligations in America, are paying into English banks more than British exporters are drawing out, for British imports are greater than exports. If American exports exceed imports to a considerable extent, the quantity of London exchange for sale in New York (that is, bills of exchange payable in London in pounds sterling) increases, while at the same time (because of the relatively small imports) there is little call for these bills on the part of American importers.

Changes in Exchange Rates. Applying here the laws of price determination, which we have already explained in detail, we see that, because of the large quantity of London exchange offered for sale and the small quantity desired, the price must be low. London exchange in New York is said, under these circumstances, to be "at a discount," that is, it will sell below par. Moving quickly to England and viewing the situation from that angle, we find that there are many British importers anxious to buy New York exchange with which to pay American exporters. But New York exchange is scarce in London because there has been little exporting to the United States. As a consequence, New York exchange in London will sell "at a premium," or above par.

We can find the *par of exchange* by comparing the gold content of, say, the dollar and the pound sterling. A British pound sterling commands \$4.8665 in gold when it contains (as in 1931) 4.8665 times as much pure gold as the dollar. When exports and imports are at a par (that is, exactly equal in value) the *rate of exchange* between dollars and pounds will also be at par, and the American importer can purchase bills of exchange payable in London in pounds sterling, on the basis of \$4.8665 per pound, plus the dealer's commission.

But if exports from the United States to England are greater than imports, he will be able to buy London exchange at less than par, perhaps at \$4.85 per pound sterling. At this same instant, the British importer in London, seeking to purchase foreign exchange payable in New York in dollars, will discover that he must pay more than par for a bill of exchange, that is, for each pound sterling he will receive only \$4.85 worth of American dollars.

It should now be clear that an excess of American imports over exports will reverse the situation, and London exchange will, in New York, sell at a premium (say, \$4.88 per pound), while New York exchange in

London will sell at a discount; that is, a pound sterling will buy more than a normal amount of dollar purchasing power—\$4.88 worth, to be exact. The problem, then, is one of supply and demand. The price of foreign exchange is low when there is an abundance of it available, and the price is high when bills of exchange are relatively scarce.

“Gold Shipping Points.” There are, however, heights and depths beyond which the price will not go. These are known as the “gold shipping points,” and they represent deviations from par beyond which it will pay the importer to ship gold in payment of his foreign obligations. If the shipping costs of a pound sterling between New York and London (covering transportation, insurance, and all handling charges) are, say, two cents, then the American importer will refuse to buy London exchange if the price goes above \$4.8865, since it would be cheaper to ship gold than to pay a higher price for bills of exchange. Similarly, American exporters, in selling to American bankers their claims upon British importers, will not take less than \$4.8465 per pound sterling, for it would be less expensive to have gold shipped from England in settlement of their claims than to sell the claims at a figure smaller than the amount mentioned. When there are no obstacles to the free movement of gold, the rate of exchange is ordinarily held between the upper and lower gold shipping points. In actual practice, gold shipments are made not by importers who have obligations to meet, but by bankers who thus increase their balances abroad and then sell foreign drafts against these balances. However, the fact that importers *could* pay their bills by shipping gold prevents the rate of exchange from going beyond the gold shipping point.

PURCHASING-POWER PARITY

Thus far, we have been considering foreign exchange between countries that are on the gold standard. But nearly all of the countries that play important rôles in international trade have abandoned the gold standard, and there is no longer a free movement of gold between them. If two countries, one on a gold and the other on a paper standard, engage in trade, the exchange rates will no longer be anchored to the gold parity and may deviate widely from such parity. This is true because the departure from the gold standard eliminates the possibility of free gold movements. The statement holds also for trade between two countries both of which have departed from the gold standard. Because the exchange rates lose their connection with a gold parity, it does not follow that there is no parity, or “norm,” about which the actual exchange rates will tend to fluctuate. Indeed, there is such a norm, which we call “purchasing-power parity,” and which means that the parity of exchange is based upon the purchasing power, and not upon the gold content, of money.

Purchasing-power parity therefore is a ratio which expresses the relationship between the price levels of the two countries under consideration. It must be thought of as an *ideal* ratio, just as the gold parity of £1=\$4.87 is an ideal ratio. But just as the *actual* rates of exchange frequently vary from the ideal when both countries are on the gold standard, so also may actual rates of exchange vary from purchasing-power parity when the trading countries have left the gold standard. As these lines are written, the pound is quoted at \$4.03. This is, of course, the *rate of exchange* at this particular time, and not necessarily the *par of exchange*.

Purchasing-Power Parity and Domestic Price Levels. When both England and the United States were still on the gold standard and the gold parity of £1=\$4.87 was in actual force, this expression of the parity of exchange could be taken literally. *For £1 was a given quantity of gold, and \$4.87 was precisely the same quantity of gold.* When international trade was transacted upon this basis of exchange, what happened was that a quantity of economic goods valued in England at approximately 125 grains of gold nine-tenths fine¹ (£1) was sent to the United States in exchange for a quantity of economic goods valued in America at 125 grains of gold (\$4.87). Thus goods exchanged for goods, as they always must in international trade, either immediately or eventually. The ratio at which they exchanged was determined by the relationship between the *purchasing power of gold in England and in the United States*. Under purchasing-power parity, the ratio at which English and American goods exchange is likewise determined by the *relationship between the domestic price levels*—expressed now, however, not in terms of gold but in paper pounds and dollars, respectively. With both England and the United States on a paper monetary basis, the statement that £1=\$4.03 means that the purchasing power of the paper pound in England is approximately the same as the purchasing power of \$4.03 (paper) in the United States. This exchange rate, then, is based upon the relation between the domestic purchasing powers of the two national currency units.

There is nothing surprising about the parity of exchange being based upon the purchasing power of money in the countries that issue it, for eventually the money must be spent in the countries of issue, if it is to be spent at all. Paper pounds are generally acceptable in England but not in the United States, and paper dollars in the United States but not in England. Hence, pounds must be spent in England and dollars in the United States. It follows that the value of the pound and the dollar must depend, in the final analysis, upon what they will buy in England and the United States, respectively. Let us suppose that these two countries, both being on a paper money basis, engage in international trade, and that all commodities and services purchased by the people of England in the United States are paid for in paper pounds, and that all goods

¹ In the interests of strict accuracy, it may be noted that British gold used for monetary purposes is eleven-twelfths fine, while American monetary gold is nine-tenths fine.

bought by Americans in England are paid for in paper dollars. It is obvious that trade could not stop at this point, since dollars in England and pounds in America lack general acceptability and are therefore but slightly useful. To be used to greatest advantage they must be returned to the country of issue and spent there for economic goods, and their usefulness will be measured by the quantity of goods they command in that country.

Speculation in Foreign Exchange. It should be noted, further, that speculation may enter into a situation such as we have described. If, for example, it appeared likely that we should soon have a rise in the price level of the United States without a corresponding rise in England, there would be a rush to convert dollars into pounds, in anticipation of the loss of purchasing power that dollars would suffer through an increase in general prices in the United States. This increased demand for pounds would alter the ratio of exchange, which might be expected to move to $\text{£}1 = \$4.25$, or to some other ratio indicating the enhanced value of the pound as compared with dollars. If a decline in the American price level were expected, with no change in general prices in England, we may be sure that Britishers would seek to buy up dollars while they were still relatively cheap. Their bids for dollar exchange would have the effect of raising the price of drafts payable in dollars, with the result that the number of cents obtainable for a pound would begin to move downward from the present 403, and might eventually get as low as (say) 375, when the rate of exchange would be $\text{£}1 = \$3.75$. If, on the other hand, the present *nominal gold parity* of $\text{£}1 = \$8.24$ were expected to come into force, there would be an immediate scramble to buy pounds while they were still available at $\$4.03$ in American paper money; and this scramble would cause the “ $\$4.03$ ” of the present paper ratio to move in the direction of the $\$8.24$ which the pound would cost, once the new gold parity had been adopted.

Speculation takes place also in the foreign exchange of countries which are firmly established on the gold standard and make no effort to prevent the shipment of gold. Dealers in exchange, like dealers in any other commodity, will buy in anticipation of a rise and sell in anticipation of a decline in price. Consequently, there are always some people buying foreign drafts because they expect an increase in demand which will enable them to reap a profit, and others selling because they look for a decline in demand which would render their holdings less valuable than they are at present. However, the exchange rates of paper currencies offer a wider scope for speculative operations than the rates of gold standard currencies; for the latter, it will be recalled, can vary only between the gold shipping points, whereas the former are likely to fluctuate more widely.

THE BALANCE OF PAYMENTS

"Favorable" and "Unfavorable" Balances of Trade. We have yet to consider the contention that the exports and imports of a country tend to be equal, and to examine briefly the mechanism which brings about the equilibrium between exports and imports. In this connection, we shall find it convenient to make use of two terms which are met with continually in the literature of international trade. For many decades, economists have been writing about "favorable" and "unfavorable" balances of trade. Indeed, the terms originated at a time when it was considered decidedly advantageous for a nation to send abroad more goods than it imported, so that it might receive gold in payment of the balance. Of more recent years we have come to the realization that the acquisition of a very large quantity of gold is not necessarily a great blessing, but may bring about distinctly unpleasant consequences through its effects upon the credit-currency systems and the price levels of the countries sending and receiving the gold. Consequently, the terms "favorable" and "unfavorable," when used in connection with an international trade balance, are likely to be misunderstood. It would certainly be clearer to refer to an "excess of exports" or an "excess of imports"; but the other expressions have become so firmly fixed in our economic language that there seems to be small hope of ousting them.

The Long-Run Equalization of Trade. To many people, international trade appears to consist primarily of exports and imports of merchandise and services of the types listed in Items 1 to 8 of Table 43. Before the era of large-scale foreign investments, these were, of course, the items of greatest importance; and it was a commonplace among writers on economics that what a country exported in the way of such goods tended to equal its imports of these kinds. Even today, when long-term investments and changes in international banking accounts form an appreciable part of a country's exports and imports, it should be obvious that, although such "claims upon economic goods" may be acceptable temporarily in exchange for economic goods, yet they are acceptable only in the sense that they constitute deferred payments; and sooner or later the holders of these claims will expect to convert them into commodities and services.

If, then, a country—say the United States—maintains a "favorable" trade balance by exporting year by year more economic goods than it imports, and receiving in exchange for its excess of exports such claims upon foreigners as are represented by stocks and bonds, we may be sure that there will come a day of reckoning when the holders of these claims will call for payment. The direction of trade will then have to be reversed, for payment must eventually be made, if it is made at all, in economic goods. Moreover, payment will involve an *excess* of imports over exports, and the United States will then have a so-called "unfavorable" balance

of trade. This is but one more illustration of the fact that trade consists, at least in the long run, of an exchange of commodities and services for commodities and services.

Maintenance of Goods Balance Under the Gold Standard. The length of time required to balance exports and imports of economic goods cannot, of course, be predicted with anything approaching accuracy, but we may inquire into the method of bringing about this equilibrium. Let us suppose, for the sake of simplicity in explanation, that all international trade consists of economic goods, neglecting for the moment such items as long-term investments and changes in international banking accounts. Let us suppose, further, that the countries which engage in trade are all on the gold standard.

It is safe to say that people ordinarily buy in their own communities, and certainly in their own countries, unless there is an advantage to be had through purchasing in a more distant region. If, for example, Englishmen import goods from the United States, they do so because they can buy here to greater advantage than at home. This would mean, in all probability, that certain commodities and services were obtainable at lower prices in the United States than in England. Otherwise there would be no incentive to buy at so great a distance. Therefore, if American exports of economic goods should continuously be greater than imports, we should expect to find the cause in the lower prices that prevail in the United States for the goods desired by foreigners, and the high prices in other countries for goods which might be purchased by Americans except for the fact that they can secure them at lower figures right at home. But if the United States continued for a long time to have larger exports than imports, the balances year by year would be paid in gold; and this gold might be expected to increase the quantity of circulating media in the United States and thus raise the price level.

An increase in general prices would eventually make itself felt in international trade. For not only goods that are sold at home, but those entering into international trade as well, would advance in price; and, in the course of years, these goods would be offered only at figures which were prohibitive, so far as foreign purchasers were concerned. For just as the influx of gold to the United States would raise prices, so also its flow from other countries would lower price levels in those particular countries; and thus it would become increasingly difficult for American business men to quote prices which would induce foreigners to buy in the United States instead of at home. Indeed, we might expect prices in foreign countries to decline so greatly that American purchasers would be attracted, and as a consequence American imports for a time might exceed American exports. We have, then, in the movement of gold a device which tends to bring about an equilibrium between exports and imports of commodities and services. If the balance is upset to a very

considerable extent, so that the rate of exchange comes close to the gold shipping point, a movement of gold takes place which in time may be counted upon to restore the equilibrium once more.

Equilibrium of All Payments Under the Gold Standard. Having seen how exports and imports are balanced under the relatively simple conditions which we assumed to exist, we may now introduce the capital movements which are included in Table 43 under Items 9, 10, 11, and 12. Paper currency movements, listed as Item 15, are similar in character to these several capital items, since paper money is in reality a credit instrument. Item 16 consists of a host of things which, if we knew perfectly all details of the situation, could be distributed elsewhere in the table; and silver (Item 14) may be regarded as merchandise. Thus we can include among exports and imports every item in Table 43, with the single exception of gold; and gold, it should be observed, is customarily regarded purely as a means of settling balances in international trade, when the nations engaging in trade are on the gold standard, as they are under our assumed conditions. If, then, our international balance sheet were the one appearing as Table 43, we should find that (apart from gold shipped) the exports of *all items* (or credits) amounted to \$8,779,000,000, and the imports of *all items* (or debits), to \$4,035,000,000, requiring a net gold import of \$4,744,000,000 to bring the two into equilibrium. The gold transferred in 1940 represents, as we have explained, a far larger percentage of the total volume of transactions than in normal years.

Obstacles to the Automatic Attainment of Equilibrium. This shipment of gold, like the shipment mentioned in an earlier paragraph, might be expected to raise somewhat the price level of the country receiving it—the United States—and to depress somewhat the price levels of the countries losing it, thus tending to bring about a readjustment of trade which would bring exports and imports into balance. However, we cannot be certain that gold entering a country may not be “sterilized” (that is, kept by the central banking system from forming the basis of credit expansion), and thus be prevented from raising the price level. And it is also possible that the country losing gold may liberalize its policy of credit extension so as to keep the loss of gold from depressing its level of general prices. In the face of such credit manipulation, the readjustment to which we have referred might not take place promptly. However, it would not be possible to continue the shipment of gold in one direction indefinitely, without forcing off the gold standard the country whose stock of gold was being depleted. And once it had abandoned the gold standard, the value of its paper currency would soon fall and the direction of trade would be reversed. This statement does not apply to *gold-producing countries* which mine and refine year by year a sufficient quantity of gold to enable them to meet unfavorable trade balances in

gold without drawing upon the stocks of bullion needed for the support of their monetary and banking systems.

The Influence of Changes in Rates of Exchange. At this point we must emphasize the fact that the forces making for an equilibrium of exports and imports are at work all the time, and do not become active merely when the rate of exchange has reached the gold shipping point. It will be remembered that international payments are usually made through the medium of bills of exchange, and that a favorable balance of trade for the United States requires the people of other countries who are importing American goods to pay a premium when they buy dollar exchange, since the demand is great and the quantity available is relatively small. At this same time, and for the same reason, foreign drafts will sell at a discount in New York. For example, the discrepancy between exports and imports might be so great that dollar exchange would sell in London at as high a price as £1=\$4.85. This high price charged for the means of making payments for American goods would in itself have a depressing effect upon exports from the United States to England, and the low price of sterling exchange in New York would stimulate imports from England to this country. It is evident, then, that fluctuations in the rate of foreign exchange tend to bring trade balances into equilibrium, and that the shipment of gold in settlement of balances takes place only after the rate of exchange has moved so far from gold parity as to reach the gold shipping point.

The Handling of Gold Shipments. It will be well also to explain more fully the statement, already made, that movements of gold, when they occur, are not handled by the importers of goods. This service is ordinarily performed not by the importers of goods, but by dealers in foreign exchange who, when the gold shipping point is reached, make a shipment of gold themselves and thus build up foreign balances against which they may write foreign drafts and sell them to those who must pay bills in foreign countries. On such drafts the dealers in exchange will naturally charge a premium which will reimburse them fully for the cost of shipping the gold, and yet will not make the total cost to the buyer higher than the cost which would be entailed if he undertook to pay his foreign obligations by shipping gold himself. Furthermore, if there is a probability that gold will soon move in the opposite direction, the additions to foreign balances referred to above may be made through a credit transaction instead of a gold shipment, since it would obviously be silly to send gold to England only to have it promptly returned. Credit transactions of this kind appear in the international balance sheet as changes in international banking accounts (Item 10 in Table 43).

Maintenance of the Trade Balance Under Purchasing-Power Parity. When countries engaging in international trade are not on the gold

standard, any shipment of gold which takes place is regarded as a merchandise transaction and not as a means of balancing exports and imports. Under purchasing-power parity, the balance of payments is maintained wholly through fluctuations in the rate of exchange. But whereas, under a gold standard, the fluctuations cannot go beyond the gold shipping points but give way at these points to the shipment of gold as a force making for equilibrium, under purchasing-power parity they know no definite limits and will extend as far as may be necessary to effect a balance between total exports and total imports. If we assume, for example, that with England and the United States on a paper monetary basis the *normal* rate of exchange (that is, the *par of exchange*) is £1 = \$4.03, we can readily see that a favorable balance of trade for the United States would, as in our gold standard illustration given above, place a premium upon dollar exchange in England. This premium, as we have explained, would tend to turn the tide of trade; if it did not succeed in so doing, a still higher premium would be charged, and the price of dollar exchange would continue to rise until exports from the United States were sufficiently discouraged and imports to the United States were correspondingly encouraged. There can be no question that a long-continued rise in the price of dollar exchange, and a consequent decline in sterling and other foreign exchange, would finally bring about an equilibrium between exports and imports.

The *par of exchange* (gold parity) of the currencies of two countries, both of which are on the gold standard, is the ratio of the *gold contents* of these two currencies, expressed in monetary terms.

The *par of exchange* (purchasing-power parity) of the currencies of two countries which are not on a common metallic monetary standard, is the ratio of the *purchasing powers* of these two currencies in their respective countries of issue.

The *rate of exchange* of the currencies of two countries is the *actual market price* of each currency in terms of the other.

1. Why is gold generally acceptable in international trade transactions, whereas paper money is not?
2. To what extent was gold used in the settlement of international payments in 1940 (Table 43)?
3. Why do we wish to avoid the use of gold in making international payments?
4. What device used in our modern "clearing houses" is utilized for reducing materially the necessity of shipping gold for the settlement of international obligations?

5. Show, with an illustration, how several international business transactions might be "settled" without the shipment of gold, and also without the assistance of dealers in foreign exchange.
6. What are the difficulties involved in a settlement of this kind?
7. Introduce dealers in foreign exchange into the illustration used in your answer to Question 6, and trace the operations that must be gone through before the settlement is completed.
8. How do dealers in foreign exchange build up "foreign balances," and how are these balances reduced from time to time?
9. Why is it sometimes desirable to employ "triangular exchange"?
10. Follow, step by step, the transactions outlined in Fig. 45. Is this process, in basic principle, different from that shown graphically in Fig. 44?
11. Indicate the manner in which the use of foreign exchange enables a creditor to receive payment in the money of his own country.
12. Define "parity of exchange."
13. Under what conditions will foreign exchange sell "above par"? "Below par"? Are your answers consistent with the statement that the problem of exchange rates "is one of supply and demand"?
14. What are "gold shipping points"? Why do rates of foreign exchange tend to remain within these limits?
15. Explain the meaning of "purchasing-power parity."
16. Under what conditions is parity of exchange based on purchasing power instead of on the gold content of money?
17. What is a "favorable" trade balance? An "unfavorable" trade balance?
18. Is a favorable trade balance necessarily desirable, and an unfavorable trade balance undesirable?
19. Does the statement that "there is a tendency for exports to equal imports" relate to merchandise alone, or to other items as well?
20. How do you explain the fact that foreigners sometimes buy goods in the United States, when similar goods are made and sold in their own countries?
21. Why would it be undesirable for a country to attempt to maintain a "favorable" trade balance indefinitely?
22. What have price levels to do with the maintenance of trade balances?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 38.

Obstacles to International Trade

IN CHAPTER 38 WE LOOKED INTO THE NATURE OF INTERNATIONAL TRADE AND saw that it consists, in its essence, of an exchange of the commodities and services of the people of one country for the commodities and services of the people of other countries. The purpose of the individual exporter, in sending goods to foreign lands, may be to sell these goods for money. But, from the point of view of the nation as a whole, the purpose of exporting is to make it possible to import.

If, as should now be clear, the object of engaging in international trade is to obtain goods which can scarcely be produced at home, or can be produced abroad more advantageously than at home, how may a nation gain most from its trade with other nations? Will it be by sending to other countries as many commodities and services as possible, while receiving few in return? Will it be, in other words, by giving every possible encouragement to exportation while seeking by artificial means to keep imports at the lowest possible ebb? Obviously not. We should seek, as a nation, to get as many commodities and services as possible from other countries, while giving to other countries as few as possible. From the point of view of the nation, then, *we gain from international trade through importing*. And those who regard international trade as an opportunity to sell goods for money may be reminded that our ability to export is limited by our willingness to import, since the imports of a country as a whole must in the long run equal its exports.

The Case for Free Trade. The case for free trade is the case for the world-wide geographical specialization of labor. If every country specialized in those lines of production in which its effectiveness is greatest, the resources of the world as a whole would be used in the most productive way. The result would be the production of the greatest possible total of all commodities and services. When these economic goods were distributed on the basis of free trade, each nation would obtain a greater sum total of enjoyable goods than would be available through any other process.

RESTRICTIVE DEVICES IN INTERNATIONAL TRADE

The Prevalence of Restrictive Trade Policies. While we should not rate highly the intelligence of an individual who tried to gain economically

by giving away as much economic goods as possible in return for as little as possible, many nations have tried to gain by the adoption of a similar policy. That is, in spite of the weighty arguments for freedom of trade, most nations have adopted policies which greatly restrict imports, and hence the international exchange of goods. Particularly after World War I was it true that large numbers of nations, whether or not they were formerly worshipers at the shrine of restrictionism, adopted protective tariffs and other restrictive devices.

The Protective Tariff. Under a protective tariff, certain goods produced abroad are made dutiable at rates designed to exclude these products, thus leaving the home market free for exploitation by domestic producers turning out the same kinds of goods. If, for example, a certain grade of cloth can be obtained from England for 25 cents a yard but cannot be produced in this country for less than 35 cents, then a duty of, say, 15 cents a yard is levied upon this grade of cloth, so that our wants will be satisfied by domestic manufacture, if satisfied at all. When similar duties of varying amounts are applied to hundreds or thousands of articles, the result is a "protective tariff." Many rates are more than sufficient to exclude the foreign products, while others are, in effect, low enough so that imports continue to come in to some extent despite the duties. But the purpose of the protective tariff is clearly the exclusion of foreign goods.

The Use of Subsidies. Besides the protective tariff, other measures are taken by nations to control the volume and direction of international trade. Some of the results of a protective tariff can be obtained by using subsidies, which are direct governmental grants to specified industries. When the government pays an industry a given amount on each unit of its output, the industry can sell its product at a price lower than full costs of production. This low price for the domestic product makes it difficult for foreign producers to compete with domestic producers, and relatively easy for the subsidized industry to sell in foreign countries, other things being equal. The price a government pays to maintain a subsidy is readily ascertainable, so that it is clear just which industries are being favored and to what extent. Subsidies have not been an important instrument of trade policy in the United States.

Indirect Protection. Domestic industries may also be protected by sanitary regulations applied to imported food products, veterinary laws, regulations requiring that imported goods bear a distinctive mark indicating their country of origin, and regulations governing the granting of public contracts, which specify that domestic materials must be used or require materials to come up to certain specifications. All of these measures may have legitimate and nonprotective uses, but they may also be designed to discriminate against foreign goods. When the cost of marking a product to indicate the country of origin is greater than its original cost of production, or when the specifications made in public contracts are such that

only domestic producers can meet them, these measures may be quite as effective as a tariff in protecting home industries. In the United States, the Pure Food and Drugs Act, the Meat Inspection Act, and the Horticultural Quarantine Act have operated in some cases to furnish such protection.

The Use of Import Quotas. Import quotas have been used to protect domestic industries chiefly since 1930, and came to be employed in more than a score of countries. Their use involves laws or executive decrees which limit (by value, quantity, or weight) the imports of certain articles that may enter the country in a specified period of time. The countries using this device may have both maximum and minimum quotas for individual exporting countries, or they may give special concessions to countries which grant similar concessions in return. The regulations governing import quotas vary widely as between countries in the methods of allocating the quotas among countries which export the specified articles, the time periods in terms of which the quotas are stated, the units in which the quotas are stated, and the base periods on which the quotas rest.

Import quotas may be more effective than tariffs in protecting domestic industries. Normal tariff rates may lose their effectiveness when foreign currencies are being devalued rapidly, when other countries are dumping goods abroad at unusually low prices, when other countries are granting subsidies to their exporting industries, or when there are great disparities among other countries in the cost of production of certain goods. In such cases, a tariff may fail to exclude imports, and import quotas may provide surer protection. A protective tariff, once enacted, is difficult to change, but import quotas are flexible. On the other hand, import quotas, unlike import duties, do not provide revenue, and are more likely than a tariff to disrupt existing international trade relations. Even more important, perhaps, is the fact that import quotas cause goods to move between countries under governmental permit, instead of moving under the influence of price-cost relationships.

Foreign Exchange Controls. Many countries, in recent years, have used foreign exchange controls to regulate the total volume, specific content, and direction of their international trade. Foreign exchange controls usually operate through a central system for clearing foreign exchange bills. The central bank of the country, or a special agency created for the purpose, is given the power to establish buying and selling rates for bills of exchange, and to deal in foreign exchange. Another agency (perhaps the ministry of commerce or finance) parcels out available supplies of foreign exchange among importers. Exporters of the country are required to demand foreign currencies for goods exported, and to sell their exchange to the central authority which sells it again, to approved importers, at a profit.

Foreign exchange is sometimes allotted on the basis of priority lists,

exchange being granted to importers of foods, raw materials, partly processed materials, and finished manufactures on the basis of the importance and desirability of classes of imports as indicated by the priority lists. In addition to such priorities, some goods may be placed on a free list, so that they can be imported at any time, while others may be completely banned and the use of foreign exchange for their importation forbidden at all times. Sometimes foreign exchange is allocated on the basis of the countries from which importers wish to bring goods, so that trade may continue to be divided among countries in the proportions which prevailed before exchange control was established. In certain importing industries, trade associations may be allowed to allot foreign exchange to individual importers, or individual importers may be allowed to share the foreign exchange allotted to a given industry on the basis of relative imports in some past period.

Like the import quotas discussed above, foreign exchange controls are a more flexible instrument of trade policy than protective tariffs. They may be very useful in emergency situations, and their results are more definite and more easily controlled than those of protective tariffs. On the other hand, foreign exchange controls are complicated and expensive to administer, they often lead to favoritism to particular industries or companies, and are particularly likely to divert trade from its natural channels and upset existing trade relations. Foreign exchange controls are not simply a device for protecting domestic industries. They may be used to stop the movement of gold from a particular country, to stabilize exchange rates, to prevent an outflow of capital, to make sure of obtaining necessary imports, to serve as a bargaining tool in international relations, or for other purposes. Usually, however, they are employed to limit and restrict the volume of international trade, and frequently they give protection to domestic industries.

Blocked Accounts. Foreign exchange controls may serve to bring current imports and exports into balance, but sometimes a country which imposes such controls may be heavily in debt to other countries and may have to make large annual payments on account of interest and principal. When such a debtor country cannot expand its exports and is unable or unwilling to decrease its imports sufficiently to allow these outgoing payments to be made, its government may direct that the payments be made to banks in the home country but forbid their transfer to the creditor countries. These "blocked accounts" may then be used by their owners for various purposes *within the debtor country*—to pay for travel or study, to make investments in real estate, securities, or business enterprises, or to purchase goods for export. Thus, the blocked accounts are another device for lessening pressure on the international trade, the supply of foreign exchange, and the gold reserves of the country.

Clearing Agreements. Trading countries sometimes enter into clearing agreements to provide for the settlement of commercial obligations as a whole. A fixed exchange rate between the monies of the two countries is agreed upon, and a governmental agency is set up in each country to handle trade transactions. Importers then pay the domestic authority of their country for goods imported, instead of paying the exporters of the other country, while exporters receive payments from their domestic authority and not from foreign importers. In this way, the obligations arising from trade are settled within each country, and the use of foreign exchange is avoided so long as the total imports and exports of the countries are kept in balance. While clearing agreements are ostensibly used to expedite the payment of foreign obligations, it is obvious that the governments engaging in these agreements are thus enabled to control the volume and content of their international trade, and afford protection to domestic industries. Clearing agreements may also contain provisions for the settlement of outstanding debts between the countries, or separate payment agreements may be drawn up for this purpose.

Restrictionism as a World Policy. Since territorial division of labor and freedom of trade would bring the greatest sum total of enjoyable commodities and services to the world as a whole, it is true that restrictive measures are a tremendous source of economic loss when considered from this point of view. They cause the resources of the various nations of the world to be used, in many instances, in lines of production to which they are ill adapted, and the gains which would result from the application of the principle of geographical division of labor are thus lost. The result is a much smaller total amount of goods for the world as a whole than the maximum which could be obtained. But the people of different nations do not often or seriously consider world advantages or disadvantages. Personal or local advantages are usually the prime considerations of immediate importance, and national advantage is thought to be the ultimate goal to be attained.

THE PROTECTIVE TARIFF AS A NATIONAL POLICY

Until the outbreak of World War II the protective tariff was the only device of any great importance used by the United States to control international trade and protect domestic industries against foreign competition. Therefore our analysis of restrictionism as a policy for a single nation will be conducted in terms of the protective tariff, but many of the arguments and conclusions which are developed will apply also to the various other restrictive devices which have been in general use.

The Protection of "Infant Industries." One of the earliest and strongest arguments for the protective tariff has to do with the encouragement

of young industries. So far as other countries have advantages over us in production which rest upon natural conditions, there is little that can be done about it. But, in the early days of a country, many advantages in production possessed by other countries are of the acquired sort; that is, the foreign industries are temporarily more productive because of the advantage of an early start and years of practice in these lines of production. To accept this condition as natural and permanent, and to buy the products of these industries from foreign countries continually, may be to disregard the young nation's best interests. For it may well be that, if the young and temporarily inefficient industries are protected from foreign competition for a time, they will develop in size and efficiency until their products can be turned out more advantageously than those of other countries. Clearly, a nation should produce goods at home whenever it is more advantageous to do so than to obtain them from other countries, and it is anticipated in the case of infant industries that the gains to be realized after the industries have grown up will be more than sufficient to compensate for the losses sustained while protection is necessary.

This argument is, therefore, valid to some extent, but its validity is weakened by two circumstances. In the first place, it is impossible to decide with accuracy in advance just which industries will eventually become strong and self-sustaining. The policy of the United States has been to grant protection whenever it was asked, and it is certain that some of the industries protected must have been greatly stimulated by our tariff. On the other hand, it is equally certain that some industries have been kept alive up to the present which should have been permitted to die a peaceful and natural death a hundred years ago. Such industries have always been dependent upon the tariff for their existence, and in all probability always will be. The second circumstance is that industries, however great and efficient they may become, never feel that they are sufficiently grown up to relinquish tariff protection and face foreign competition. The steel industry in the United States, for example, would be considered by most persons a particularly lusty infant, and yet it has not insisted that it be allowed to make its way in the world without protection. Whatever may have been the validity of the infant industry argument in the past, it is certain that for the future it must carry very little weight.

The Home Market Argument. Ignorance or disregard of the basic principles of international trade enables protectionists to advance what is called the "home market argument." It is contended that the exclusion of foreign products from the country will leave the home market entirely to domestic producers, thus giving them a new market in addition to that which they already enjoy. Production and employment will be stimulated, it is said, and wage conditions improved. But it is a fundamental principle of international trade that the exports of a country must equal its imports in value over a period of time, and that if a country will not import, it

cannot continue to export. To the extent that the protective tariff shuts out imports, our exports must eventually suffer, and the home market is built up only at the expense of the foreign market. The home market may be slightly the more desirable of the two, or it may be less desirable. The question is not one to be decided in an offhand manner. In any case, however, no large additional market can be created by the tariff.

Wages and the Tariff. The most effective argument for protection, from the point of view of obtaining from the people of this country a sufficient number of votes to authorize the continuance of the policy, has to do with the effect of protection on wages. At times it has been held that the protective tariff is the cause of high wages. Does not the tariff permit the protected enterprisers to charge higher prices than they could otherwise charge, and do not the higher prices lead to higher wages for the workers? This line of reasoning puts the cart before the horse. According to the theory of opportunity costs, enterprisers in protected industries have to pay, for units of the factors of production, prices which are as high as these factors can command in other industries. The combination of the factors of production in the industries requiring protection, however, is for some reason not so effective as in other industries, so that the products of the former cannot be turned out at prices which will admit of effective competition with similar foreign-made products. As a result, these industries need a tariff because it will permit them to charge higher prices than could be obtained in competition with the industries of other countries, and it will enable them to continue producing while paying the current prices for the factors of production. Since the market rate for labor is more than could be afforded in these industries if the tariff were not in effect, it is true in a sense that the protective tariff has the effect of bolstering up wages in these particular fields of business.

There is, however, no reason to suppose that higher wages will be paid for labor of a given grade in protected industries than elsewhere, or that wages in general will be raised by the tariff. The relatively high level of wages in this country depends upon the relatively high effectiveness, or productivity, of labor. Wherever the productivity of labor is high, wages tend to be high, regardless of the policy used in international trade. The United States glories in the possession of a comparatively high level of both money wages and real wages under a protective system, and yet England has been second only to us in both respects under a system which until recently has been practically free trade. It would be most heartless of us to allow any of our people to live in misery and want because of insufficient earnings, if their condition could be improved by the simple expedient of enacting a higher protective tariff. That it could not be so improved reduces the high-wage argument to an absurdity. Our conclusion, then, must be that the most probable effect of the tariff on wages

is to reduce real wages by causing the prices of many commodities to be higher than they would be without the tariff.

Protecting the American Standard of Living. Many people in this country believe firmly that, though high wages are not caused by the protective tariff, the maintenance of a high level of wages and a good standard of living depends upon the tariff. The argument runs along these lines. The wages and the standard of living of workers in this country are high, and we take pride in the fact. But our enterprisers, because they pay high wages to these workers, necessarily have high costs of production and are rendered unable to compete under conditions of free trade with the enterprisers of other countries, who can secure their workers for much lower wages. Under the protective tariff, the cheap goods made by foreign "pauper laborers" are shut out, and our wages and standard of living can be maintained. If the barrier were once let down and a flood of cheap goods came into this country, our own enterprisers would be compelled to shut down and throw men out of work, or else keep their plants running by reducing wages to a point which would make the maintenance of the American standard of living impossible.

The flaw in this argument lies, of course, in the statement that high wages necessarily mean high costs of production. This statement seems unquestionably true to most persons who receive wages and to many others, and yet it is not necessarily true at all. No accurate estimate of labor cost can be made unless two facts are known: (1) the rate of wages paid, and (2) the amount of work turned out for the wages. High wages and large productivity of labor may very well mean low labor cost, while low wages and very low productivity of labor often result in a high labor cost. The truth of this statement can be established by reference to facts which are familiar to all. Money wages in the United States are the highest in the world. If high wages necessarily mean high costs of production, how does it happen that we can sell commodities to the value of billions of dollars a year (\$4,021,000,000 worth in 1940) to the people of foreign countries? Why, with their low wage rates, can they not undersell us in everything? The answer is that our workers turn out so much product per unit of wages that costs are in reality low, not high, in these lines of production.

Does a country with a high wage level and standard of living have anything to fear from free trade with a country having a low wage level and standard of living? We think not. England with high wage rates and standard of living engaged in trade for many years on a basis of free trade with China, where these labor conditions are exactly reversed, but there was no noticeable tendency to drag English laborers down to Chinese wages and standard of living, or to raise Chinese laborers to the English level. It is important, then, to remember from this discussion that high wages and satisfactory living standards are dependent upon high effective-

ness or productivity of labor, rather than upon the maintenance of a protective tariff.

The Tariff and Employment. The contention that the protective tariff increases employment is related to the high-wage and home-market arguments. If we shut out foreign products, it will be necessary to produce our supplies of these goods in this country, and we shall have more industries than otherwise. These industries cannot run without laborers and there will be much additional employment created for our working men. This argument, of course, disregards the familiar fact that if we will not import, we cannot continue to export. As men are put to work producing the goods which are no longer purchased abroad, other men are thrown out of employment in industries producing for the export market. The effect of the whole process is to shift large amounts of capital, labor, and land to the production of goods which could be obtained more advantageously from abroad, instead of using these factors in our export industries where they are especially productive. No large, additional source of employment is created by the tariff. We do, by erecting tariff barriers, make it more difficult for us to obtain the goods we desire, but that is a doubtful advantage. We could also "increase employment"—that is, provide more hours of work—if we impeded production by equipping our workers with ball-and-chain or handcuffs, but apparently our protectionists have overlooked the possibilities of this procedure.

The Protection of Vested Interests. It is sometimes thought necessary to continue the policy of protection, once it is begun, even though some other policy would be more desirable if we were to begin over again. The reason given is that, under the guaranty of the tariff that foreign competition will be excluded, individuals have made large investments in protected industries and workers have adapted themselves to conditions in these lines of production. If protection is not continued, all of these individuals will suffer losses. It will be seen, however, that this is not an argument for the protective tariff, but, rather, one against the abrupt removal of protection. Economists generally would concede that the reductions in protection should come gradually, rather than suddenly, but they hold that in any event reductions must be made.

The Tariff as an Instrument of National Preparedness. When no other argument prevails, protectionists of the old school fall back upon the necessity for national preparedness. Under a system of free trade, the United States would be largely dependent upon other nations for certain commodities, and would be subject to the ever-present danger of having her supplies of these products cut off in time of war. Let us, then, maintain the protective tariff, and thus insure within this country the production of as many essential products as possible, say these protectionists. What if this policy does mean that, to a certain extent, our productive resources will be used ineffectively, and a smaller sum total of com-

modities and services than the maximum will be produced, just so long as our national security is promoted? This argument, of course, admits the direct uneconomic effects of protection and, in addition, falls short of the mark in another respect. To try to become a self-sufficing nation is to follow a narrow nationalistic policy, and the instrument of this policy, the tariff, is a very prolific source of international ill feeling and friction. Though it may be admitted that it is a serious matter when our supplies of important commodities are cut off in time of war, we may go still further and recognize the fact that when nations cooperate with and are dependent upon one another on the basis of freedom of trade, the likelihood of war is lessened to a marked degree.

Protection Against Dumping. In recent years the protective tariff has come to be supported on grounds which appear to be quite different from those which are described above. The tariff is advocated, for example, as a protection against the dumping of foreign goods in this country. "Dumping" is the term used when the practice is carried on by the people of other nations. When we ourselves engage in such practices, we regard them merely as good business. Dumping has been variously defined, but one useful definition describes it as the sale of goods at a lower price in one market than in another. If, for example, a French perfume sells at the equivalent of twenty dollars an ounce in France, and is marketed in the United States by its producer for ten dollars an ounce, dumping is taking place. Dumping is not a new source of worry for Americans. Indeed, our first tariff to contain any considerable element of protection was passed shortly after the War of 1812, largely because of the expressed determination of British producers to sell goods in this country for any price they would bring, or even to give them away if need be, in order to stifle the young industries which had sprung up in America and thus recapture our market for themselves.

The consideration of dumping gives us an interesting sidelight on the attitude of Americans toward foreign products. If the foreign products are offered at higher prices than those at which identical products could be turned out in this country, we are often inclined to purchase the articles from abroad as being of superior quality, or for some other reason. To offer us goods at the same prices for which they could be produced here is considered reprehensible, and our suspicions are at once aroused. If foreign producers plumb the depths of infamy by offering to furnish us certain products more cheaply than we could produce them ourselves, we begin to look for the "pauper laborer" in the woodpile and enact a tariff to protect ourselves from this threat to our economic welfare. Finally, to include the worst possible case, if foreigners should offer to give us certain goods free of charge, we would probably go to the extreme of cutting off all trade relations with the offending countries.

Since everyone is presumably interested in getting as many commodities

and services as possible at the smallest possible cost, why do we object to the sale of goods to us by the people of foreign countries at very low prices? It is because of the fear that this process will not be continued indefinitely. The sale of goods at these low prices might go on so long that we would become dependent upon others for them and give up their domestic production, only to find the prices raised later above the level at which the goods could be produced in this country. For this reason it is considered well to avoid goods which are offered on suspiciously favorable terms. However, dumping can be guarded against without continually maintaining high duties which permit the mulcting of domestic consumers.

The Tariff and Economic Stability. The argument that the protective tariff may be of benefit because it promotes economic stability is close kin to the home market argument. It has been admitted that the tariff may be used to preserve the domestic market for American producers at the cost of reducing our foreign markets to a similar extent, but it was not at all clear that this result would be advantageous. The economic stability argument holds that the domestic market is definitely more desirable, because it is more stable. "Let us produce and consume by ourselves to a large extent and shut out disturbing influences. The result may be, of course, that we shall have a smaller sum total of commodities and services to enjoy than otherwise, but may it not be better to have a smaller flow of goods, if the flow is more constant?"

Our answer to this question may well be favorable, as is anticipated by those who advance the argument, but it is at once necessary to ask whether economic stability can actually be obtained by this policy. To what extent is our economic instability the result of importing from and exporting to foreign countries, and thus likely to be affected by the tariff? It is extremely doubtful whether the major factors in the problem of economic instability will be much affected by the tariff policy. Even though foreign supplies of various products are excluded from the domestic market, it will still be possible, unless domestic production is controlled, for our producers to turn out larger amounts than will be taken by consumers at prices sufficiently high to enable the producers to recover their costs of production. The demand for different goods will not be controlled by a protective tariff and can vary as in the past. Neither can the tariff prevent an overextension of credit in this country. It will consequently appear to most observers that there is room within a country such as the United States for a considerable degree of economic instability, even if outside influences could be shut out.

The Scientific Tariff. Since the early years of the twentieth century there has been much talk about the true principle of tariff-making, which is that the tariff rates should be just high enough to cover the difference between foreign and domestic costs of production. No favors or special

privileges would be granted to domestic producers. Indeed, the tariff would be used only to guarantee a fair contest between foreign and domestic producers, according to its sponsors.

This principle, as it is ordinarily presented, sounds very fair and reasonable, but it will not bear close examination. In the first place, it would be difficult, if not impossible, to ascertain the domestic and foreign costs of production of a wide variety of articles. It is a sufficiently troublesome problem to obtain an approximation of domestic costs, and even greater difficulties are encountered abroad, where information of this sort is considered strictly private and is almost invariably withheld from investigators. Great expenditures would certainly be necessary to secure any worth-while information, and whatever data were obtained would probably be out of date before they could be used as the basis of tariff legislation.

Moreover, even if the principle could be strictly followed, the result would be disheartening. Trade is beneficial because it enables us to obtain goods more cheaply than we could produce them for ourselves. The effect of a tariff in equalizing costs of production would be to remove and destroy all the advantage which exists for us in international trade. Therefore, such trade would be wiped out so far as the United States is concerned. Then, too, let us consider what would happen in this country. All commodities would be protected and all that were consumed by us would be produced here, whatever the cost might be. If the commodity in question were bananas, the procedure would be to find out how much more it would cost to produce them here than in Central America, and then apply a tariff rate sufficiently high to equalize costs of production. The result, so far as most consumers were concerned, would be to raise their price to a prohibitive figure. If the good in question were rubber, silk, or coffee, the same procedure would be followed.

It might be argued that no one would favor carrying the principle to such extremes, but it is difficult to say just where it would stop. We have records of speeches by United States Senators in which they state that they would be willing to see duties of 300 or 400 per cent applied, if necessary, in order to accomplish the purpose of the tariff. But if we are to go as high as 400, then why not to 800, or to 2000 or 3000 per cent? Moreover, one Senator has favored the draining of the Everglades of Florida so that certain semi-tropical products might be raised there; thus it may be seen that the protection of the commodities mentioned in the preceding paragraph is quite within the range of possibility. All in all, the "true principle" of tariff-making is a ridiculous and worthless one.

Conclusion on the Tariff as a National Policy. Although the argument in the present section has been conducted in terms of the United States, as being of greatest interest to American readers, the conclusions which have been reached will apply, changing as conditions change, to other

countries as well. The benefits that have been claimed for the protective tariff have been seen to exist largely in the minds of those who find it desirable to support protectionism for some other reason than the reasons they advance. Where benefits have resulted, it is usually true either that they do not continue into the present, or that they could have been obtained more economically by some other method.

The losses under protection are beyond question. The productive resources of each country are diverted from industries in which they would be especially productive to other lines in which their employment is relatively ineffective. The desired commodities and services are obtained under difficulties, and the sum total of goods available for the enjoyment of the people of the country is smaller than otherwise. This ill treatment of all the citizens as consumers results in gains for some enterprisers, but not for others. If the higher prices that can be charged under the protective tariff are just sufficient to enable producers to continue in business in these ineffective industries, then (under conditions of competition) each factor of production will receive payment at the going rate and no more, and the loss to many persons in terms of higher prices will not be compensated by the gains to others. In other cases the tariff will allow prices to be sufficiently high to permit profits, and sometimes very large profits, to the owners of the protected businesses. It is axiomatic, however, that they never gain as much in profits as the people on the whole lose as consumers. In any event, this is taxation or exploitation of the many for the benefit of the few. Whether or not some individuals profit from the use of the protective tariff, it is to be condemned severely on economic grounds. And, of course, the same general conclusions must be reached with respect to the use of other devices for restricting international trade.

PROTECTIONISM IN THE UNITED STATES

The United States as a Creditor Nation. Having concluded our general discussion of protectionism as a national policy, we must now note that, as a practical matter, the use of this policy by the United States has been particularly unfortunate in recent decades. In the middle of the last century, this country was experiencing an "unfavorable balance of trade," that is, there was an excess of merchandise imports over exports. This condition arose, in part, from the fact that the country was a borrowing or debtor nation at the time. So long as we continued in that rôle there was little outspoken criticism of our tariff by other countries. People interested in collecting from debtors seldom discriminate against them, or interfere with their chances of becoming prosperous and able to pay their debts. But after the beginning of the last quarter of the nineteenth century our trade balance and credit position changed. During and after World War I our loans to other countries were tremendous,

and the United States took a commanding position as a creditor nation.

At the close of 1930, the private investments of the United States in foreign lands were estimated at \$14,900,000,000 to \$15,400,000,000,¹ and the discounted value of the debts of other nations to the government of the United States amounted to \$7,000,000,000. Our loans and investments abroad were not made in the form of money, but consisted of economic goods. If the loans were to be repaid, if our investments abroad were to be retrieved, and if we were to receive income from our loans and investments, the payments had to be made to us not in money, but in commodities and services. If other countries were to pay the United States, say, \$500,000,000 in a given year, it was necessary for their exports to exceed their imports by this amount. By the same token, we could receive such a payment only by allowing our imports to exceed our exports by the same amount.

In the face of a desire to collect our debts and the knowledge that the payments had to be made in the form of commodities and services, we twice raised our tariffs against imports after World War I and thus made it increasingly difficult for other countries to send us goods. Our Tariff Act of 1922 gave us the highest level of tariff duties in the world, except for one other country, and decidedly the highest among the important industrial nations of the world.² The Tariff Act of 1930 was no improvement, for a study of comparative ad valorem rates in the two Acts based upon imports for consumption in 1928 showed an increase in the average rate of duty from 33.22 to 40 per cent, so far as items were comparable in the two Acts.³ This high tariff policy was clearly inconsistent with our position as an outstanding creditor nation.

The Changing Nature of Our Exports. In the more distant past, foreign countries protested but little against our tariff policy, not only because the United States was a debtor nation, but also because our exports consisted predominantly of raw or semi-manufactured products which these countries greatly desired and against which they would not discriminate. Since the beginning of the last quarter of the nineteenth century, the trend in our exports has been away from raw and partly finished products toward manufactured goods. These are goods which can be obtained from other countries as well as from the United States, or can be produced in the countries to which we export them at only slight differences in cost in many cases. Consequently, every upward revision of

¹ United States Department of Commerce, "A New Estimate of American Investments Abroad," *Trade Information Bulletin No. 767*, Washington, Government Printing Office, 1931, p. 1.

² The League of Nations, Economic and Financial Section, International Economic Conference, *Tariff Level Indices*, Geneva, The League of Nations, 1927, especially p. 16.

³ The United States Tariff Commission, *Comparison of Rates of Duty in the Tariff Act of 1930 and in the Tariff Act of 1922*, Washington, Government Printing Office, 1930, p. 1.

our tariff has tended to bring in its wake a host of discriminations and retaliations against the United States. Of course, other countries do not ordinarily discriminate openly against our products, or enact tariff laws which are avowedly retaliatory, because our President has been given wide powers in dealing with goods from countries which clearly practice discrimination and retaliation. But it is not difficult to read between the lines of the changing trade policies of other countries.

The Difficulty of Changing the Tariff. In spite of the apparent desirability of changing our policy with respect to international trade, it seemed almost impossible, up to the middle of the 1930's, to alter the prevailing sentiment in favor of the protective tariff in the United States. Many millions of our people are classed as wage earners, and these workers had been carefully "educated" in the matter of the tariff over a long period of time. That the protective tariff brings with it "high wages and full dinner pails" was to many workers much more than a mere political campaign myth. It was to them a tradition, a religion handed down from one generation to another, and did not appear to be open to argument. The responsibility for the development and maintenance of this belief is easy to place.

The Influence of the Press. The tariff views of the workers as a class were largely the result of the news items and editorials of newspapers and the speeches of politicians. For many people the newspaper is the one and only form of literature, and certainly the only available printed medium of information on the tariff problem. Most of the newspapers with which one came in contact, and particularly those in the great industrial centers where large numbers of workers are found, were staunch supporters of our tariff policy. To their editorial pages the worker, if his belief in the tariff had been shaken by hard times, might turn with every assurance of seeing repeated the familiar fallacies upon which was built his belief in the benefits of protection. Even in depression, he would find there assurances that the tariff was the foundation of our prosperity in the past and is our only hope for the future. Surely, those who depend upon the editorials of the average newspaper for an understanding of the principles of international trade must always remain in almost complete ignorance of the subject.

The Speeches of Politicians. The speeches of men in political life, as heard directly or over the radio, or as reproduced in the newspapers, also greatly influenced popular opinion on the tariff. For many years, both major political parties were in accord in favoring the protective tariff in principle, although they disagreed somewhat about particular schedules. Political talks on the tariff were almost universally worded in terms of the ancient fallacies with which we are now familiar, and yet they proved convincing to most wage earners and to many others. The candidate for public office would say, "Vote for me. My party stands for

the protective tariff, and the tariff is the cause of all your prosperity." People would flock to his standard. If the same man had said, "Vote for me, because my party stands for the protective tariff, and the tariff is the cause of the heavy rains which have brought you relief from the drought from which you have been suffering," these same people would have laughed at him. And yet the tariff would ordinarily be as truly responsible in the one case as in the other.

Students often ask, Were our political figures, our Senators, and our Congressmen so ignorant of the principles of international trade that they really believed the arguments they advanced about the tariff, or were these contentions made for a purpose? While many of the arguments were no doubt made in all sincerity, it seems very unlikely that all of our political leaders were really deceived by some of the absurd statements about the tariff, unless it is true that a man can repeat a thing so often that, despite its falsity, he eventually comes to believe it himself.

Senators and Representatives are elected from states and from districts within states. Since the interests of the people as consumers are rarely considered in Congress, the business of each member of that body with regard to the tariff is to get as many favors as possible for the business interests of his district. Some businesses within a district might be making large profits behind the tariff wall, others might be dependent upon the tariff for their very existence, and still others might not be concerned at all about it. In any case, the attempt was usually made to obtain protection for all. Many cases are on record of industries receiving a generous measure of protection where none was asked. Tariff advantages for one district could be obtained by members of Congress only by co-operating with other members desiring favors for their own districts. Whatever the method used, each member had to look out for his own district, or powerful support would be withdrawn from him and at the next election he would be likely to find himself one of the represented, instead of being himself a representative. Many tariff speeches were doubtless made as a justification of the actions of the members, and for popular consumption at home, to convince those who were not convinced and to reassure those who were.

The Attitude of Business Men. The one discordant note in the hymn of praise for protection was the fact that many American business men were coming to view the tariff with doubt and fear. Of course, those whose businesses were dependent upon the tariff for large profits, or for their very existence, quite naturally continued to favor the policy of protection. Almost anyone in the same position would feel the same way. If a man knows that a certain policy is vital to his own interests, it is extremely easy for him to discover that this same policy is of the utmost importance for the welfare of the country as a whole.

On the other hand, the policy of protection was opposed by many

of our great bankers, who sensed that restrictions on imports were great obstacles to a continuation of our foreign investment policy and to the development of New York City as an international financial center. Farmers, too, were coming to suspect more and more strongly that they had little to gain and much to lose from continued attempts to "protect" them. Finally, the owners and managers of industries which were efficient in their own right, which did not depend upon the tariff, and which were able to meet world competition, were beginning to oppose the protective tariff. Being able to meet competition, these industries were anxious to develop their exports further and gain the markets of the world, but they found themselves greatly hampered in their efforts because we refused to accept imports freely and thus made it difficult for the people of other countries to buy from us.

RECENT DEVELOPMENTS IN TRADE POLICY

The Reciprocal Trade Agreements. The Tariff Act of 1930 did not restore prosperity in the United States, but our international trade almost disappeared in the years immediately following its passage. By 1934 the Congress of the United States was ready to enact a law which seemed destined to go far toward modifying our tariff policy. This measure, called the Reciprocal Trade Agreements Act, authorized the President to enter into reciprocal commercial agreements with other countries for the purpose of fostering international commerce. In such agreements, the President could modify existing import duties and other restrictions in return for similar concessions from other countries. He could not, however, increase or decrease any duty by more than 50 per cent, or transfer articles from the dutiable to the free list or vice versa. The agreements could be consummated only after giving reasonable public notice of the intent to negotiate with the other countries, after holding public hearings at which those interested could express their opinions about the prospective agreements, and after seeking information and advice from the United States Tariff Commission and the Departments of State, Agriculture, and Commerce.

The policy expressed in the Act was pursued actively during the next ten years, and agreements were drawn up with twenty-seven countries, including Great Britain, Belgium, Sweden, Switzerland, Cuba, Canada, France, Czechoslovakia, Iran, Iceland, and a number of South and Central American countries. It will not be feasible for us to consider the details of these trade agreements, but we may examine briefly those concluded in 1938 with Great Britain and Canada. Under these agreements, the United States received tariff cuts or other concessions from Canada with respect to 1489 products, and from Great Britain with respect to about 450 products. Canada and Great Britain, in return, received conces-

sions from the United States on about 450 and 150 products, respectively. The agreements affected American exports which in 1937 were valued at about \$440,000,000, and American imports amounting to some \$260,000,000 in that year.⁴ In signing her agreement with the United States, Great Britain acted for Newfoundland and about fifty nonself-governing colonies. At that time the United States transacted about one-third of her total foreign trade with the areas included in these agreements, and the three countries together (the United States, Great Britain, and Canada) accounted for almost one-third of the world's total international trade.

Appraisal of the Reciprocal Trade Agreements. It is impossible to determine the exact effects of the reciprocal trade agreements upon the international trade of the United States. To do so would require a comparison of our actual volume of trade in several years with the volume which would have been transacted in the absence of the trade agreements—and the latter, of course, is an unknown quantity. Our international trade is subject to so many influences that one cannot single out the specific effect of the trade agreements. Some people argue that our trade with all countries was probably affected in the same way by the general recovery of business and insist that, if our trade increased faster with agreement than with non-agreement countries, the influence of the agreements is indicated. However, this is not necessarily true. Our trade with Germany, for example, may have been reduced by resentment felt here over that country's handling of the Jewish people, her default on financial obligations, or her general program of aggression. American trade with Japan may have been similarly affected at one time by our attitude toward her invasion of China and her treatment of Americans in the war area, and may later have been increased by her heavy purchases of war materials and supplies. Since Germany and Japan were both non-agreement countries, failure to consider these matters would result in giving our trade agreements with other countries more or less credit than they deserve.

With such cautions in mind, we may note that our imports from countries with which we had trade agreements increased 22 per cent between 1934-35 and 1938-39, whereas imports from non-agreement countries increased only 12½ per cent. Over the same period our exports to countries with which we had trade agreements increased 63 per cent, and exports to non-agreement countries increased only 32 per cent.⁵ It seems probable, therefore, that the trade agreements had a stimulating effect on our international trade, though its exact extent cannot be measured. Of course, any influence of these agreements on our trade was completely obscured during the period of World War II.

⁴ *The New York Times*, November 18, 1938, and *Chicago Tribune*, November 17, 1938.

⁵ *The Department of State Bulletin*, Washington, United States Department of State, January 26, 1947, p. 162.

On general grounds, the trade-agreements program deserves approval. The agreements reduced tariff duties or made other concessions where these actions would do us the most good and tended to increase trade. Since it seemed impossible to get many nations to lower trade barriers at one time, reciprocal trade agreements probably provided the best means available at the time for increasing international trade by reducing trade restrictions. The objections to the trade agreements came more largely from small business men than from our major industries. Small business men, who had no hope of developing foreign markets, were disturbed by the increased importation of foreign products. In addition, our tariff-minded politicians and newspaper writers made a determined effort to convince the farmers of the country that the trade agreements were detrimental to agricultural interests. The farmers were told, at one time, that our imports of cheddar cheese had increased fifteen-fold under the auspices of our trade agreement with Canada. The implication was, of course, that they had been badly injured by this development, but the tellers of the tale forgot to add that, even after the increase mentioned, these imports amounted to only 2.2 per cent of the domestic production of cheddar cheese. Similarly, the farmers were urged to protest against great increases in our imports of cream, though these imports amounted, after the increase had taken place, to only one-tenth of one per cent of domestic production.⁶ In the field of manufacture, alarm was expressed over the trade-agreements provision which permitted the importation of 4,800,000 pairs of shoes a year from Czechoslovakia, although these imports, if actually achieved, would have amounted to only $1\frac{1}{4}$ per cent of our domestic output.

Wartime Controls over International Trade. After the reciprocal trade agreements program had been in effect five years, World War II broke out, the United States becoming involved in the conflict late in 1941. Wartime conditions brought great increases in the extent to which the international trade of the United States was controlled by the federal government. Even before this country entered the war, our government set out to accumulate stock piles of certain strategic and critical materials, and entered into agreements with various Latin American countries, for the purchase of all their available supplies of such materials. Moreover, after December 27, 1941, the government assumed complete control over the imports of a number of materials and these things could be imported only by some governmental agency.

Our foreign trade was affected also by the "freezing" of foreign assets. The freezing process was based on an Executive Order administered by the Federal Reserve Banks and the Treasury Department, and it prohibited all transactions within the jurisdiction of the United States in which the country (or its nationals) to which the order applied had any

⁶ *Foreign Affairs*, April, 1938, pp. 428, 429.

interest, after a stipulated date. The freezing process, first used in April, 1940, was extended to country after country as German conquests continued, to Germany and Italy themselves in June, 1941, and to Japan in July, 1941. Naturally, all imports and exports between the United States and any country whose assets had been frozen were automatically prohibited, unless our government saw fit to issue licenses for specific transactions. This was true also of transactions between countries with frozen assets and any third country, if the transactions were to be financed by means of foreign credits held in the United States.

The freezing orders as such were not applied to the Latin American countries, but something of the same effect was produced by the promulgation in July, 1941, of the Proclaimed List of Certain Blocked Nationals. This list contained the names of persons and firms believed to be nationals of or sympathizers with the Axis countries, and located in countries of the western hemisphere. Our government forbade all business and financial transactions between citizens and residents of the United States and listed persons and firms, unless specifically permitted by licenses issued by the Treasury Department. The United States had considerable cooperation from Latin American countries in carrying out this policy, which was aimed quite definitely at depriving the Axis powers of any economic advantages they previously derived from enterprises, investments, and business connections in Latin America.

The exports of the United States were also subjected to direct control during the war period. In July, 1940, the National Defense Act provided for a general system of export control by means of licenses. This export control system was originally intended to apply to essential raw materials, machine tools, certain chemicals, arms, ammunition, and war goods in general. However, the list was increased rapidly, and soon scarcely anything included in our normal list of exports could be exported without a federal license. The export control system prevented other countries from buying here raw materials and goods which were needed in our war program, but permitted us to send all kinds of goods to countries of the western hemisphere which were collaborating with the United States in her war program. Even before our entry into the war, export control enabled us to interfere with and hamper the war activities of the Axis nations.

Finally, the lend-lease policy of the United States had an important effect on our trade. This policy was provided for in the Act to Promote the Defense of the United States, which was passed in March, 1941. This Act authorized the President to sell, transfer title to, lease, lend, or otherwise dispose of various defense goods to other countries whose defense was deemed vital to the safety of the United States. Defense articles in this connection included (1) weapons and munitions of war, (2) machinery, facilities, tools, materials, parts, and supplies necessary to the production, maintenance, and repair of war weapons and goods, and (3) any agricul-

tural, industrial, or other commodity or article for defense. The Act specified that lend-lease aid could be given under any terms and conditions which were satisfactory to the President, and that the resulting benefit to the United States could be payment in kind or property, or any other direct or indirect benefit which the President deemed satisfactory. From March 11, 1941, to August 31, 1946, lend-lease aid to our allies amounted to over 50½ billion dollars, with the British Empire receiving \$31,368,000,000, or almost 62 per cent of the total, and Russia \$11,267,000,000. In the same period, reverse lend-lease, or contributions of the allied nations to the United States, amounted to about 7½ billion dollars.⁷

International Trade of the United States in Wartime. Clearly, the various governmental controls we have been describing did not all make for a decline in the total volume of our international trade. Some policies, such as the lend-lease program and the over-all purchasing agreements for strategic and critical materials, tended to increase trade. As a result, the total volume of the international trade of the United States, in terms of merchandise, increased year by year from 1939 to 1944, as is shown by

TABLE 47. INTERNATIONAL TRADE OF THE UNITED STATES, 1939-46
(In millions of dollars)

(Source: *Survey of Current Business*, February 1947, p. 42.)

Year	Exports	Imports	Total Trade
1939	\$ 3,177	\$2,318	\$ 5,495
1940	4,021	2,625	6,646
1941	5,147	3,345	8,492
1942	8,035	2,745	10,780
1943	12,965	3,381	16,345
1944	14,259	3,919	18,178
1945	9,806	4,136	13,942
1946	9,738	4,934	14,672

the data in Table 47. The expanding total volume of trade in this period was largely the result of sharply increasing exports; and lend-lease exports of war goods, foods, and industrial materials played a very important part in increasing our total exports. In 1943, for example, the total exports of \$12,965,000,000 included \$10,440,000,000 of lend-lease exports, whereas in 1944 lend-lease exports amounted to \$11,305,000,000 out of total exports of \$14,259,000,000.⁸ After 1944, our total volume of international trade fell off considerably, though it still remained very high when judged by pre-war standards.

The Bretton Woods Agreement. While World War II was still in progress, preliminary steps were taken to lay the foundation for a revival of international trade after the war. In July, 1944, representatives of

⁷ *The Chicago Tribune*, November 18, 1946.

⁸ *Survey of Current Business*, February, 1947, p. 42.

forty-four nations met at Bretton Woods, New Hampshire, and drew up the famous Bretton Woods Agreement, which provided for two international financial institutions—the International Monetary Fund and the International Bank for Reconstruction and Development. The Agreement had been ratified by forty-five nations by the end of 1947. In this chapter, we shall consider only the International Monetary Fund, leaving the affairs of the International Bank for discussion in Chapter 41.

The International Monetary Fund. The purposes of the Fund are (1) to promote international monetary cooperation through a permanent institution; (2) to facilitate the expansion and balanced growth of international trade; (3) to promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation; (4) to assist in the establishment of multilateral systems of payments between members and in the elimination of foreign exchange restrictions; (5) to make the Fund's resources available to members in order to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity; and (6) to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.

On the basis of its membership at the end of 1947, the Fund will have a total capital of about $7\frac{1}{2}$ billion dollars. The United States will make the largest contribution ($2\frac{3}{4}$ billions), followed by the United Kingdom, China, France, and other nations. Each member nation must express the par value of its currency in terms of gold or United States dollars. Having established such a par value for its currency, a nation may change this par value by 10 per cent simply by notifying the Fund. Any further change, however, can be made only with the consent of the Fund's management, and an unauthorized change in the value of a nation's currency may result in the suspension of the nation from the use of the Fund, or even its outright expulsion. Currencies of the nations will exchange at the values set, except that rates of exchange may vary within one per cent of the official ratios.

With the Fund in operation, nations will collect for exports and pay for imports through bills of exchange, as usual. However, if a nation runs short of exchange balances to make payments in another nation, it can purchase the other country's currency from the Fund. If France, for example, needs Mexican pesos to pay for imports, she will pay francs into the Fund and secure the pesos she needs. There are, of course, limitations on this process. No nation may buy the currencies of other countries through the Fund in any one year to an amount in excess of 25 per cent of its original contribution to the Fund; and the Fund may set a limit beyond which it will refuse to sell a nation any more of the currencies of other nations until the first nation has made a readjustment of its affairs.

The point is that, when a nation has to buy foreign currencies from the

Fund, it has been buying abroad more than it has been selling, and is slipping into debt. Limitations on its purchases of foreign currencies through the Fund are expected to induce it to "clean house." It can put high import duties on luxuries, and use its limited foreign exchange to purchase necessary imports. It can put pressure on its citizens to seek out markets for exports, to work harder and increase efficiency, and so on. As a result, the nation will probably sell more and buy less, and thus acquire the foreign currencies that it needs.

On the other hand, if a nation persistently sells more than it buys in international trade, and other countries have to buy its currency through the Fund, the Fund's supply of that nation's currency will become short. This is especially likely to happen to the United States in the post-war period. In such an event, the management of the Fund will officially recognize the shortage, borrow currency from the nation whose currency is becoming scarce, purchase the currency for gold, or proceed to ration the limited supply of the currency among the nations which desire it. The Fund may also issue a report setting forth the causes of the shortage and making recommendations designed to bring it to an end. A representative of the member country whose currency is involved will participate in the preparation of such a report. Under the operation of the Fund, the United States or any other country cannot continue exporting if it will not import, and it will be under pressure to lower its tariff so that more goods will be imported or to seek out opportunities for making worthwhile loans in other countries. Either of these developments would place more of the scarce currency at the disposal of the other countries.

The member countries may use the resources of the Fund for capital transactions of reasonable amounts required for the expansion of exports, or in the ordinary course of trade, banking, or other businesses, or to effect capital movements which are met out of a member's own resources of gold and foreign exchange; but such capital movements must be in accord with the purposes of the Fund. A member cannot use the Fund's resources to effect a large or sustained outflow of capital, and the Fund may request a member to exercise controls to prevent this use of its resources or may even declare an offending member ineligible to use them.

Under the operation of the Fund, international trade situations which in the past have led nations to abandon the gold standard, depreciate their currencies, institute foreign exchange controls, and set up barter arrangements for dealing with other countries are expected to be resolved by orderly readjustments of the countries' economic affairs. At the same time, a temporary upset or disequilibrium in a country's international balance of payments can be provided for at stable exchange rates through the Fund. The result should be a larger volume of international trade and the stabilization of international monetary relations.

Each member country must agree that it will not (1) impose restrictions

on the making of payments and transfers for current international transactions, (2) engage in any discriminatory currency arrangements or multiple currency practices except as authorized by the Fund, or (3) cooperate with any non-member country in any manner contrary to the provisions of the Fund agreement. Each member country is obligated to furnish such information as is necessary for the effective discharge of the Fund's duties. This information might cover any nation's holdings of gold and foreign exchange, gold production, gold imports and exports, total imports and exports of goods, capital transactions, price indexes, and international investments and obligations. Any member may withdraw from the Fund at any time by transmitting a notice in writing to the Fund at its principal office, and the Fund may declare a member ineligible if it fails to fulfill any of its obligations.

The Fund is to be controlled and managed by a Board of Governors, Executive Directors, a Managing Director, and a staff. All powers of the Fund are vested in the Board of Governors, which has a position similar to that occupied (in theory, at least) by the stockholders of a corporation. Each member country appoints one Governor, and each Governor is entitled to cast 250 votes, plus one vote for each \$100,000 of his country's original contribution to the Fund. There are twelve Executive Directors, of whom five are appointed by the five countries making the largest original contributions, two are selected by American republics other than the United States, and five are chosen by all other member countries. The Executive Directors are similar to the board of directors of a corporation. They will supervise the general operation of the Fund, and exercise the powers and carry out the functions assigned them by the Board of Governors. The Managing Director, selected by the Executive Directors, holds a post similar to that of the president of a corporation. His task is to carry on the ordinary business of the Fund and to supervise the work of the operating staff.

The Board of Governors and the Executive Directors were duly appointed and held their first meetings in March, 1946, and May, 1946, respectively. The Managing Director was selected by the Executive Directors on May 6, 1946. Par values based on existing rates of exchange had been established for 31 member countries by early 1947. The member countries were called upon for a part of their scheduled contributions to the Fund late in 1946, and the United States had paid its contribution in full by February 26, 1947. In June, 1947, the Fund was said to be just coming into operation,⁹ and its membership had reached a total of 45 countries by August, 1947.

The Economic and Social Council of the United Nations. Another recently developed organization which may exert an influence on inter-

⁹ *The Department of State Bulletin*, Washington, United States State Department, June 22, 1947, p. 1236.

national trade in the post-war period is the Economic and Social Council of the United Nations. Declaring it to be the intent of the United Nations to promote (1) higher standards of living, full employment, and conditions of economic and social progress and development, and (2) solutions of international economic, social, health, and related problems, the Charter of the United Nations, drawn up at the San Francisco Conference in 1945, provided for the creation of the Economic and Social Council. This body will be composed of representatives of eighteen nations, chosen for three-year terms by the General Assembly of the United Nations. The Council will sit continuously, and may become a very important division of the United Nations, since the solution of international economic and social problems would go far toward the prevention of war.

The Council may make or initiate studies and reports with respect to international economic, social, cultural, educational, health, and related matters, and may make recommendations with respect to any such matters to the General Assembly, to the Members of the United Nations, and to the specialized agencies concerned (such as the United Nations Food and Agriculture Organization, the International Monetary Fund, the International Bank for Reconstruction and Development, the International Labor Organization, and the United Nations Aviation Organization). It may prepare draft conventions for submission to the General Assembly, with respect to matters falling within its competence, and it may call, in accordance with rules prescribed by the United Nations, international conferences dealing with such matters.

The Council may enter into agreements with the specialized agencies referred to above, defining the terms on which any agency concerned shall be brought into relationship with the United Nations. It may coordinate the activities of the specialized agencies through consultation with and recommendations to such agencies and through recommendations to the General Assembly and to the Members of the United Nations. It may take appropriate steps to obtain regular reports from the specialized agencies, and reports on the steps taken to give effect to its own recommendations and to recommendations on matters falling within its competence made by the General Assembly.

The Council may furnish information to the Security Council, and shall assist the Security Council upon its request. It shall perform such functions as fall within its competence in connection with the carrying out of the recommendations of the General Assembly. Finally, it may, with the approval of the General Assembly, perform services at the request of Members of the United Nations and of the specialized agencies, and shall perform such other functions as are assigned to it from time to time by the General Assembly.

The functions of the Economic and Social Council obviously are stated in very general terms. However, if the Council is to try to find solutions

for international economic problems and to promote higher standards of living, full employment, and economic progress, it will have to be concerned with international trade, restrictions on trade, international monetary relations, and international credit and investment transactions. If the Council decides that tariff walls and other restrictive devices are limiting world trade and indirectly causing unemployment and business failures, it may well seek the scaling-down or elimination of these restrictive devices. However, there is a paragraph in the charter which forbids the United Nations to deal with anything that is entirely a domestic affair of a Member, and it remains to be seen just what matters will eventually fall into this category.

The Economic and Social Council had also shown strong signs of life by the end of 1947. We may note, in particular, that it had appointed a Preparatory Committee, consisting of representatives of 18 nations, to pave the way for the establishment of an International Trade Organization of the United Nations. The Committee met in London late in 1946, in New York early in 1947, and in Geneva from April to August, 1947. At these meetings the original draft proposal for the Charter of the I.T.O., prepared by the United States, was brought to its final form.

The Charter aims at contributing to the improvement of standards of living throughout the world by promoting the expansion of international trade on the basis of multilateralism and nondiscrimination, by fostering stability of production and employment, and by encouraging the development of backward areas. It contains very important provisions with respect to trade restrictions, state trading, intergovernmental commodity agreements, and international investments. A United Nations Conference on World Trade and Employment met at Havana, Cuba, beginning November 21, 1947, to agree upon and recommend the Charter of the I.T.O. to the governments of the participating nations. Action on the Charter by the governments of the individual nations, and of course the actual functioning of the I.T.O., remained matters for the future.

Conclusion. Much praise and criticism had been heaped upon the international organizations which we have been describing long before they started to function, but an effective appraisal of them can scarcely be made until they have functioned for several years. Their success will clearly depend, to a great extent, upon the spirit and intelligence with which they are operated; for experience indicates that it is impossible to set up foolproof organizations for the stimulation of international trade or the stabilization of international finance. If the organizations operate successfully in these fields, we may eventually see the happy day when the story of the benefits of restrictionism will be pulled down from the shelf of works on economics and placed among the fairy tales where, for the most part, it indubitably belongs.

1. "International trade, like domestic trade, is fundamentally barter." Explain.
2. Why does the economist contend that the imports of a country must equal its exports over a period of time?
3. How would the absence of trade restrictions tend to maximize the gain which the nations of the world could derive from international trade?
4. Explain the general nature of a protective tariff.
5. "Domestic industries may be protected indirectly as well as directly." How?
6. Why may import quotas be more effective than protective tariffs in certain situations? Explain.
7. How may foreign exchange controls be operated to afford protection to domestic industries?
8. "Foreign exchange controls may be set up for many purposes but they often restrict trade and protect domestic industries." Do you agree? Why or why not?
9. Discuss the relative merits of foreign exchange controls and protective tariffs.
10. Compare clearing agreements with foreign exchange controls proper.
11. Could we, by means of the tariff, monopolize the domestic market and maintain our export trade at the same time?
12. "The superiority of one country over another in a branch of production often arises only from having begun it sooner. There may be no inherent advantage on the one part, or disadvantage on the other, but only a present superiority of acquired skill and experience. A protecting duty, continued for a reasonable time, may permit the country which lacks this skill and experience to carry on the industry until the producers are educated up to the level of those with whom its processes are traditional." Comment on this argument for the protective tariff.
13. "We are importing at the rate of about \$300,000,000 worth of foreign goods per month into the United States. Most of these goods could be made here. There is not a manufactured article produced in the United States in which the labor cost is less than 90% of the total cost following the raw material from start to finish. Now, if that is true, of the \$300,000,000 that we are sending abroad each month to buy foreign-made goods, \$250,000,000 is going out from the people of the United States to employ German, French, English, Japanese, and Chinese labor, while our own workers walk the streets in idleness. Unless adequate protection is secured against foreign-made goods, there is little hope of this country being able to maintain the present standard of living of the American workingman and woman."
Is this a valid argument for the protective tariff? Why?
14. Is the protective tariff effective as an instrument for shielding a country from outside economic influences and for promoting economic stability? Why?
15. Would the efforts of nations to be economically self-sufficient be more or less likely to promote world peace than would the economic cooperation and interdependence of these nations? Why?
16. What is meant by the "scientific tariff?" Explain. Would you favor a tariff law of this kind? Why?
17. "The use of the policy of protectionism by the United States has been particularly unfortunate in recent decades." Explain.
18. Explain fully why it has been so difficult in the past to obtain a general downward revision of our tariff.

19. State the major provisions of the Reciprocal Trade Agreements Act of 1934.
20. "The reciprocal trade agreements program has been condemned as being too effective." Explain.
21. Show why the effects of the reciprocal trade agreements program on our international trade are difficult to measure.
22. Describe the additional governmental controls which were applied to the international trade of the United States during World War II.
23. Did our wartime controls have the effect of sharply reducing the volume of our international trade? Explain.
24. What are the objectives of the International Monetary Fund, and how is the operation of the Fund expected to lead to their attainment?
25. "Rigid adherence to the provisions of the agreement concerning the International Monetary Fund is likely to modify the policy of the United States with regard to international trade." Explain.
26. How is the operation of the International Monetary Fund supposed to make for a larger volume of international trade and the stabilization of international monetary relations? Explain.
27. Discuss the possible significance of the Economic and Social Council of the United Nations and its functions in relation to international trade.

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Foreign Investments and International Indebtedness

WE BEGIN OUR STUDY OF THE PROBLEMS OF FOREIGN INVESTMENTS AND international indebtedness by examining the general principles on which international loans and investments, and exports and imports of capital are based.

THE ECONOMIC EFFECTS OF A NET OUTFLOW OR INFLOW OF CAPITAL

The Meaning of an "Export of Capital." In considering the process by which international indebtedness is incurred, we should recognize that, in speaking of international movements of capital, the word "capital" is being used in a somewhat different sense from that in which it is ordinarily used by economists. Its usual definition is "produced goods intended for further production"; that is, capital is a part of those scarce, material, and transferable goods that are commonly called "wealth." When borrowing takes place between nations, however, the capital that is imported and exported consists, in the first place at least, of purchasing power or claims upon wealth, rather than articles of wealth themselves.

What happens whenever the individuals or governments of foreign nations obtain loans in the United States—or, to look at it from the other point of view, whenever we make investments in foreign securities or properties—is that purchasing power, such as bank deposits, formerly owned by people in this country is turned over to foreigners or foreign governments. A part of this purchasing power must be spent in the United States for the banking services in connection with the loan, while another part may be spent here if this country appears to be the most advantageous market for the particular commodities desired by the borrowers or if the terms of the loan provide that a certain part is to be spent here. It usually happens, however, that a considerable part of such loans is—for a time at least—wanted by the borrowers in some other form than commodities and services. Even though, in the last analysis, the borrowers in many cases will want commodities and services, their immediate desire is usually to

obtain most of the loan in the currency of their own country, to be used there, or to obtain commodities and services from some country other than the one that extended the credit.

The borrowers' problem, then, becomes that of transferring purchasing power from the lending country to their own country. This may be accomplished by having their agent in the lending country use their credit balances to buy bills of exchange on the borrowing country and send them to the borrowers, or by themselves drawing bills of exchange against their balances in the lending country and selling the bills at home. Conceivably, their balances in the lending country could be used to buy gold there, which could then be transferred to the borrowers.

A Persistent Net Capital Outflow and the Foreign Exchange Market. When a country has a persistent net outflow of capital, the problem of transferring the funds becomes serious. The borrowers' attempts to convert the funds by buying bills of exchange in the lending country add to the already existing demand for drafts on the borrowing country or on other countries not directly involved in the lending. On the other hand, their attempts to transfer funds by selling at home bills of exchange on the lending country add to the supply of such exchange already existing in the borrowing country. Since the increased demand in the lending country for exchange on the borrowing country, and the increased supply in the borrowing country of exchange on the lending country, would persist because of the continuing loans, the effect would be to raise in the lending country the exchange rate on the borrowing country and lower in the borrowing country the exchange rate on the lending country. These changes in exchange rates seem likely to result ultimately in a flow of gold from the lending to the borrowing country, although other conditions may intervene to render this flow unnecessary during a greater or lesser period of time.

For example, it is probable that dealers in foreign exchange in the lending country can set up credit balances in the borrowing country through short-term advances by the banks there, and can sell additional exchange on the borrowing country by drawing bills against these balances. It is also entirely possible that the central bank of the borrowing country may intervene and offer to give the borrowers funds in the borrowing country in exchange for the claims against credit balances held by the borrowers in the lending country. The purpose in doing this, from the central bank's point of view, may be to prevent an inflow of gold when such a flow appears undesirable because of conditions either in the borrowing country or in the international credit situation, or to obtain foreign exchange which may be counted as a part of legal banking reserves in some countries. Either type of banking activity, however, will be indulged in only so long as it appears desirable with regard to banking,

reserve, and gold conditions at home and abroad; and when these activities cease, a flow of gold tends to take place.

The Effect on International Trade. If the flow of gold toward the borrowing country, because of a persistent capital movement, is so large and so long-continued that the lending country's credit base is reduced and the quantities of money and deposit currency in use are curtailed, there tends to be a decline in the general price level. On the other hand, the price level in the borrowing country tends to rise under the influence of the increases in money and deposit currency that have resulted from the borrowing process. So far as the fall in prices in the lending country makes its goods appear cheap to other countries, it becomes a good place in which to buy and its exports become large in relation to its imports, since the commodities of other countries seem expensive as compared with the goods obtainable at low prices at home. On the other hand, the borrowing country, with its high prices, becomes a highly desirable market, while it is able to sell only comparatively small quantities of its commodities and services in other countries. As a result of this situation, the borrowing country comes to have an "unfavorable" balance of trade, while the lending country has an export surplus.

However, it is known that even substantial transfers of gold between countries do not necessarily alter their respective price levels. But whether the price levels change or not, the results may be much the same, for there is likely to be, in any case, an expansion of purchasing power in the borrowing country. The expansion may be extensive, since the country's banking reserves are increased by the inflow of gold, or by the acquisition of foreign exchange which is counted as reserves in some countries. The increase in the monetary demand for economic goods in the borrowing country is likely to stimulate production (and speculation), but a part of the purchasing power is likely to be used for importing products from other countries. Moreover, some part at least is likely to have the effect of increasing the exports of the lending country, either directly, or indirectly by way of another country or countries.

Qualifications and Conclusions. This description of the effects of a persistent net outflow of capital from a particular country has been presented as simply as possible. Page after page of qualifications have been written on the theory described above. These qualifications concern such questions as the differences between domestic, import, and export prices when the general price level is rising or falling, the effects of lending upon countries not directly involved, and the influence upon trade relationships of such economic phenomena as dumping, international cartels, and tariffs and other obstacles to trade. The conclusion to be drawn from the discussion is that, when a country is experiencing a persistent net outflow of capital, its exports of commodities, services, and gold tend to be large as compared with its imports, while the reverse is true of the

borrowing country. This import-export relationship in the lending country may come about through an increase in exports while imports are unchanged, by a decrease in imports while exports remain constant, or by changes in both.

A Persistent Net Inflow of Payments on Account of Long-Term Indebtedness. International loans, however widely some may appear to differ from others, are all alike in one respect, in that they make it necessary for payments to pass from the borrowing to the lending country on account of interest or dividends, and eventually in the repayment of principal. The longer a country has had a persistent net outflow of capital funds, the greater are the sums it must receive annually, and the more difficult will it be for the country to keep on lending enough to make the net flow of payments on the capital account move outward. Eventually the time comes when, from the standpoint of the lending country, the inward payments on account of existing indebtedness, added to the payments representing new investments of foreigners in the lending country, will exceed the exports of capital being made by the lending country, and the net balance of payments on account of long-term indebtedness will be inward and not outward.

When this happens we may expect the same sequence of events as has already been described, except that the country which is being repaid will be in the position formerly occupied by the borrowing country. The need to transfer net payments to the former lending country operates to increase both the demand for foreign exchange in the repaying country and the supply of exchange on the repaying country in the one that is being repaid. The rate of exchange on the creditor country rises, while that on the debtor falls. Eventually, after the banks in each country have gone as far as appears wise in facilitating the transfer of funds, a flow of gold to the former lending country may be expected. Despite all steps that can be taken by the central banking system of the creditor country, some expansion of its purchasing power—that is, an expansion of its money and deposit currency as compared with that of the debtor country—may be expected. This relative change in purchasing power will, as before, influence imports and exports, tending, directly or indirectly, to increase imports to the former lending country and to increase exports from the debtor country, regardless of whether or not the price level rises in the creditor country and falls in the debtor country.

In ending this description, we may refer once more to the qualifications of this broad statement of theory which it might be desirable to present were this discussion more extended. Our conclusion is, nevertheless, that a country that is receiving a persistent net inflow of payments on account of long-term indebtedness will have an “unfavorable” balance of trade—that is, an excess of imports—and that repaying countries will tend to be affected in the opposite manner. This changed relationship of imports

to exports in the country that is being repaid may come about through a growth in imports while exports remain constant, through a decline in exports while imports remain constant, or through changes in both; and the same analysis applies to the repaying country. It does not follow that the country that is being repaid will necessarily have an increase in imports from or a decrease in exports to the country that is repaying, or that the latter must have an increase in exports to or a decrease in imports from the country that is being repaid. These things may happen, or they may not. But we know that the country which is receiving net payments *must* have an import balance of trade from whatever source derived, and that the reverse is true for the repaying country.

THE UNITED STATES AS A CREDITOR NATION

The First World War Period. Up to the year 1916 the United States was a debtor nation. At the beginning of World War I, we, as public and private debtors, owed individuals of other countries approximately 5½ billion dollars, while foreign individuals and governments owed individuals in the United States about 2½ billion dollars.¹ Between 1914 and the end of 1919, the United States made huge loans, both public and private, to many countries, and as a result found herself an international creditor to the extent of about 18 billion dollars. This sum, however, represented the nominal value of foreign obligations to this country rather than the actual value, which was probably about 14 billion dollars in view of the adjustments finally made in the war debt obligations of the Allied governments to this country. In addition, allowance should be made for our obligations to other countries, amounting roughly to 4 billion dollars; so that the net actual indebtedness of individuals and governments throughout the rest of the world to individuals in, and the government of, the United States at the close of 1919 was almost 10 billion dollars.²

The 1919-30 Period. The growth of the United States as an international creditor did not end in 1919. While our government ceased to lend to other governments a few years after the close of the war, the private investments of our people in foreign securities and properties continued at a merry pace until, by the end of 1930, it was estimated that the total indebtedness of foreign governments and individuals to the United States government and individuals in this country amounted to roughly 22 billion dollars.³ This figure, however, did not include our investments

¹ R. A. Young, *The International Financial Position of the United States*, New York, National Industrial Conference Board, Inc., 1929, p. 3.

² *Ibid.*, pp. 48, 49.

³ United States Department of Commerce, Bureau of Foreign and Domestic Commerce, *A New Estimate of American Investments Abroad*, Washington, Government Printing Office, 1931, pp. 1, 2.

in Alaska, Hawaii, and Puerto Rico, or in missionary and educational institutions abroad, or any *short-term* obligations due individuals in this country. If we deduct from this estimate some 4 billion dollars, which was approximately our indebtedness to foreign countries in all but short-term obligations, there remained a net indebtedness to the United States of about 18 billion dollars.

The War Debts. The fact that the United States was so great an international creditor in 1930 caused considerable concern, especially in view of the traditional high tariff policy of this country. One of the most disturbing elements in the situation was the matter of the war debts. After the United States entered World War I in April, 1917, loans to the Allied countries consisted largely of direct advances from our government to their governments, as authorized by the various Liberty Loan Acts. It was these direct intergovernmental loans that resulted in the war debts. In making these loans, funds held by individuals and organizations in this country were turned over to the United States government through the purchase of Liberty Bonds. This government then placed the funds, or credits, at the disposal of the Allied powers as needed for the purchase of materials and supplies, the stabilization of foreign exchange rates, and for other purposes.

The war loans, which resulted in the war debts, differed from ordinary international loans in at least two important respects. As we have already noted, these loans were made by our government directly to the governments of the countries with which we were allied, whereas foreign loans are ordinarily made by individuals or companies in one country to individuals or companies in other countries. Hence, the war debts constituted a political as well as an economic problem in all the countries involved. In the second place, the proceeds of the war loans were used for purposes of destruction, so that their expenditure did not provide the means of repayment by adding to the productive capacity of the borrowers. Ordinary loans, of course, are made primarily for productive purposes.

The Funding Agreements and War Debt Statistics. Several years elapsed after World War I before arrangements were made for repaying the war loans. The first "funding" agreement, or arrangement for payment by installments over a long period of years, was concluded with Great Britain in 1923. Other funding agreements followed, until by 1927 the largest debtors of the United States had made arrangements to settle war debts. The total nominal funded indebtedness of our debtors on account of war loans proper, purchases of surplus war supplies, purchases from the United States Grain Corporation, and relief credits, was 11,468 million dollars in November, 1928. To clear up this indebtedness, the debtor nations were obligated to pay some 20,938 million dollars, on account of principal and interest, between 1929 and the end of the debt-paying period, about 1987. The value of these scheduled payments, as of 1929,

was 7870 million dollars, with the future payments discounted at 4 per cent, or 6538 million dollars at the rate of 5 per cent.⁴

Prospects for War Debt Payments. Even after the war debts were safely funded and future payments arranged, there was considerable doubt that these debts would ever be paid. Several factors led to this doubt. First was the question whether the debtor nations were economically able to make the required payments, and whether those in power in these nations would find it politically safe to undertake the payments. Second was the question whether the debtor nations were under moral obligation to pay. The debts had been contracted after our entrance into the war—after the war had become our cause as much as that of the debtor countries. Many of these nations thought that our advances to them should have been regarded not as loans to countries pursuing an objective in which we took no interest, but as expenditures for the security and defense of the United States quite as much as for that of any of the Allied countries—in other words, that they were contributions, according to our ability, to a common cause.

In the third place, the willingness of some countries to make the war debt payments was affected by the discrimination we had practiced in making the war debt settlements, for we treated some of our debtors much better than others. Fourth, it was apparent that the governments of the debtor countries could not, as a matter of political expediency, tax their citizens in order to make war debt payments to the United States unless they continued to receive their reparations payments. By "reparations" we mean those payments which Germany was obligated to make her opponents in World War I for loss and damage to which the Allied and associated governments and their citizens had been subjected by Germany. There was grave doubt that Germany could make the payments which had been imposed on her, but little question that our debtors would refuse to pay us if they did not receive their reparations.

Finally came the important question whether the United States could receive the war debt payments. Some people insisted that there would be little difficulty in this connection, because of the relatively small size of the annual payments. While 256 million dollars per year, the annual average payment due from 1930 to 1934, is a large absolute amount, it is only a fraction of one per cent of the annual income of this country in good years and bad, and less than 6 per cent of our imports in 1929. But the war debt payments could not be considered by themselves, for we would have had to receive these payments in addition to all other payments which had to pass from other countries to this country year by year. In 1930, our private foreign investments amounted to about 15 billion dollars. A yield of 5 per cent on these investments would have required the acceptance of about 750 million dollars a year by this

⁴R. A. Young, *The International Financial Position of the United States*, pp. 192, 193.

country, if investors were to receive interest payments and dividends.

These incoming payments would have been offset to some extent by outgoing payments on account of the investments of foreign countries in the United States. However, the total payments to be received from abroad each year would have amounted to a large figure. These incoming payments count as exports in our balance sheet of international payments. That is, they bring about a situation like that which results from a heavy exportation of a commodity (say wheat), which would also require foreigners to make payments to this country. Therefore, if we were to receive these payments on account of foreign indebtedness, our total imports of commodities and services would have had to exceed our other export items (which required payments to us) by the amount of the war debt payment and investment payments to us. It would have been necessary, in other words, for us to have received a heavy surplus of imports, apart from the war debt payments.

Under other conditions it might have been possible for us to achieve this necessary import balance of trade, but in 1930 our high protective tariff made it practically impossible to accept the necessary imports. Moreover, generally high tariffs and other obstacles to trade throughout the world made it difficult at that time for the debtor countries to export enough to set up the necessary balances abroad, against which bills of exchange could be drawn to make payments to us. It appears, therefore, that our policy with respect to international trade was inconsistent with our position as an outstanding creditor nation, and threatened to destroy the value of our public and private loans and investments abroad. But, it may be asked, could not the United States have achieved the import balance of trade essential to the payment of foreign debts without lowering the tariff and increasing the importation of dutiable articles? It is true, of course, that an import balance of trade might have been obtained by reducing exports, as well as by increasing imports, but it is difficult to believe that this alternative would have been popular with the rank and file of American business men. If it had been possible to increase greatly our net imports of services, this country might have received large net payments on account of long-term indebtedness without much change in commodity imports. However, it did not appear that any great or sudden expansion in these service items could be looked for at that time. Certain "invisible items," such as tourists' expenditures, might have been expected to increase as time went on. Other items, such as the remittances of immigrants and payments for freight services, were more likely to decrease, the first because of our immigration policy, and the second because of agitation for the development of an American merchant marine. All in all, no great amount of relief could have been expected from this quarter.

Payments to the United States Before 1930. But, it may be asked, were not war debt and reparations payments made and received in the

years before 1930, and did not the United States in those years also receive large payments from abroad on her private loans and investments? The answer is really negative in both cases. Between 1924 and 1930, Germany paid reparations to the amount of 10,300 million Reichsmarks. In order to do this, we might assume on general principles that she had an export surplus of about the same amount, and thus acquired the necessary foreign balances against which the reparations payments were drawn. Actually Germany had in this period an *import* trade balance amounting to 6300 million Reichsmarks. The large reparations payments were possible in the face of this import trade balance only because, in the same period, Germany had borrowed 18,000 million Reichsmarks.⁵ These loans came, to a considerable extent, from the United States. Thus through borrowing abroad, Germany acquired the foreign balances with which to make reparations payments to the Allies. When these balances came to the Allied nations, they were able to make war debt payments to the United States, despite their inability to export to us, and our inability or unwillingness to import from them to any great extent. The reparations and war debt payments in these years amounted fundamentally to our taking large quantities of funds from one pocket and returning smaller quantities to another pocket.

To determine whether the United States actually received large annual payments on account of private loans and investments abroad, in the years before 1930, it is necessary to consider all of the several items that result in payments into or out of this country, on account of long-term indebtedness. Among the outgoing items there are payments on account of imports of securities (both new issues and those outstanding), investments of Americans in foreign properties, government advances to foreign governments, and redemption and sinking fund payments and interest and dividends on our securities held abroad. Among the incoming payments are included those on account of outstanding securities exported, investments of foreigners in properties in the United States, the principal of our government advances and credits returned, interest and dividends on our private investments, interest on our government advances, and the redemption and sinking fund requirements of foreign securities held by us.

When the incoming annual payments are compared with the outgoing payments on the long-term capital account from 1919 to 1930, a fairly good balance of the two movements of funds is observed. For a few years after 1919, there was a net outflow of payments from the United States, but somewhat later there developed a tendency for incoming payments to be slightly in excess of outgoing payments. On the whole, then, there was no real net inflow of payments on our foreign loans and investments

⁵ *The Economist*, London, England, Supplement on the War Debts, November 12, 1932.

in this period. Instead, we maintained and increased the net indebtedness of other nations to us by, in effect, *reinvesting* the amounts due us on account of interest, dividends, and the repayment of principal. Individuals in the United States, of course, received such payments when due, but we as a people refused them, or at least canceled their effects, by making every year a net balance of new foreign investments and loans of substantially the same amount as we received on account of old loans and investments. All in all, the creditor position of the United States did not appear very secure as of 1930.

The Elimination of the War Debts. In the decade after 1930, the creditor position of the United States virtually disappeared. The first step in the process was the complete loss of the value formerly attributed to the war debts—7 billion dollars as of 1930. When the depression of 1929 came and Germany's foreign sources of credit dried up almost overnight, she was in a serious position, for her heavy borrowings obligated her to make large annual payments on her private foreign debts, in addition to her reparations payments. Confronted by the depression and by high tariffs and other obstacles to trade which other countries were maintaining, Germany could not expand her exports sufficiently to acquire foreign balances for purposes of debt payment; nor could she provide the necessary export balance of trade by reducing her imports.

By 1931, it appeared likely that Germany, if left to her own devices, would have to default on her private debt payments to other countries, and on reparations payments as well. This would have meant loss to many private investors in the United States, and the non-payment of war debts by our former Allies because of Germany's failure to pay reparations. Acting on the principle that half a loaf is better than no bread, President Hoover proposed that, for one year dating from June, 1931, all war debt and reparations payments should be suspended. The other nations concerned eventually agreed to this proposal. In this way, a default on private debt payments due American citizens was temporarily avoided.

In the summer of 1932, the Lausanne Agreement gave Germany permanent relief from her reparations obligations, although this abandonment of reparations was presumably contingent upon a like action by the United States with respect to the war debts. Actually it meant the end of reparations, despite the fact that this country took no official action on the war debts. Nevertheless, Germany eventually defaulted on her private debt payments to other countries, by a series of steps taken in 1933 and 1934. After the abandonment of reparations, the countries which owed us war debts, with the single exception of Finland, persistently refused to meet these obligations and there is no longer any hope that these debts will ever be paid.

Decline in the Value of Our Private Investments Abroad. The private investments of American individuals and firms in foreign countries, which

were estimated at 15 to 15½ billion dollars in 1930, amounted to some 13 billion dollars at the beginning of 1935.⁶ But this latter figure does not show the true extent of the decline which had taken place in the value of our private investments abroad. These investments are divided into direct investments and portfolio (or security) investments. Direct investments are those which involve direct participation in commercial and industrial enterprises abroad, such as investments in American-controlled manufacturing and distributing organizations, mining properties, petroleum lands, plantations, and other properties. The portfolio investments include all our holdings of foreign securities, either publicly offered in this country or secured through purchase in the international market. The direct investments of almost 8 billion dollars at the beginning of 1935 represented the book value of these investments as reported by their owners at the end of 1929 with allowances for additions and deductions since that time, and the figure of over 5 billion dollars for portfolio investments represented the par value of the securities.

While the estimate of direct investments allowed for changes in the quantity of these investments, it apparently did not allow for changes in their value, which must have declined appreciably by 1935 as a result of the depression. However, when the depreciated foreign values of these properties were converted into depreciated United States dollars, it is quite possible that the estimate given for these investments was about right. But this conclusion can scarcely apply to the portfolio investments. Since most of these securities were already expressed in terms of dollars, they could not benefit by conversion into devalued dollars; and the actual value of the securities was probably much less than their par value by 1935, because of total or partial defaults by the debtors on many of the securities.

The creditor position of the United States deteriorated rapidly after 1935 as the result of a large flow of capital funds to this country. This movement had its origin in a number of economic and political factors in the United States and elsewhere. In 1936 and 1937, improved business conditions in the United States led citizens of foreign countries to invest in American stocks and bonds. Disturbed economic and political conditions in France after 1935 resulted in a flight of capital funds from that country, and a large part of these funds came to the United States. The devaluation of the belga in 1935 and of the franc in 1936, together with other difficulties of the gold-bloc countries, was accompanied by a movement of short-term funds to the United States. Other large quantities of short-term funds moved here as a result of the European political and war crises of 1938 and 1939.

The statistics of the period from January, 1935, to September, 1939, indicate that American banks and brokers reduced their funds held in

⁶ *Barron's Financial Weekly*, September 16, 1935, pp. 5, 6.

foreign countries from \$1,234,000,000 to \$532,000,000. On the other hand, the funds held by American banks and brokers for foreign customers increased from \$679,000,000 to \$3,195,000,000. Foreign holdings of stocks and bonds of the United States increased from \$2,089,000,000 to \$3,200,000,000, while American holdings of foreign dollar bonds were reduced from \$5,296,000,000 to \$3,950,000,000. Since it required a flow of only \$677,000,000 to the United States to reduce our holdings of foreign bonds by \$1,346,000,000, it is clear that these securities were disposed of at prices which averaged about 50 per cent of par. In September, 1939, foreign-owned direct investments in the United States amounted to \$2,435,000,000, and direct American investments in foreign lands totaled \$7,100,000,000.

The net creditor balance of the United States was changed by these developments so that, by September, 1939, it amounted to only \$2,752,000,000. At that time, the long-term investments of the United States in foreign countries amounted to \$11,050,000,000, while our short-term investments abroad totaled \$532,000,000. On the other side of the ledger, foreign long-term investments in the United States were \$5,635,000,000, and short-term foreign investments here were \$3,195,000,000.⁷ The movement of capital funds into the United States continued throughout the remainder of 1939, and in 1940 there was an additional net movement of some \$2,500,000,000 into this country.⁸ Hence, as of the beginning of 1941, our short- and long-term obligations to other countries just about equaled their short- and long-term obligations to us.

THE PRESENT AND FUTURE POSITION OF THE UNITED STATES

The Present International Financial Position of the United States. World War II, unlike its predecessor, did not result in a great extension of the position of the United States as a creditor nation. As in World War I, our Allies asked for large advances of food, munitions, services, and many other things; and we furnished economic goods worth about 50½ billion dollars, as we noted in the preceding chapter. However, in World War II these deliveries to our Allies were made on the basis of the Act to Promote the Defense of the United States, passed in March, 1941, which (as we have already noted) authorized the President to sell, transfer title to, lease, lend, or otherwise dispose of various defense goods to other countries whose defense was deemed vital to that of the United States. The lend-lease deliveries were not construed by this country as loans, and

⁷ The statistics for the 1935-39 period are from A. Maffry and P. D. Dickens, "The Balance of International Payments of the United States in 1939," reprinted from the *Survey of Current Business*, February, 1940.

⁸ *Survey of Current Business*, February, 1941, p. 55.

did not result in debts of other nations to the United States, for the Act provided that the offsetting benefit to the United States could be payment in kind or property, or any other direct or indirect benefit which the President deemed satisfactory.

With lend-lease deliveries to our Allies and foreign loans by our federal government eliminated from the analysis, the United States became a debtor nation again before the end of World War II. Late in 1944 our total investments abroad amounted to 11.1 billion dollars, while foreign investments in the United States totaled 12.3 billions, leaving us a net debtor by 1.2 billions. Our long-term investments abroad still exceeded long-term foreign investments in the United States by 4.4 billion dollars, but we had only one-half billion dollars' worth of short-term investments abroad, whereas foreign short-term investments in the United States came to 6.1 billion dollars.⁹

Prospects for Increased Foreign Investments. After the end of the war, however, there seemed to be an excellent chance that the United States would soon become a large-scale creditor nation once more. Several factors gave support to this conclusion. For one thing, short-term foreign investments in this country had been made for the most part with funds sent here for safekeeping, and it was considered probable that a large portion of them would be withdrawn after the return of peacetime conditions. Second, the end of the war and the discontinuance of lend-lease deliveries to our Allies found large quantities of American goods in transit, or actually in foreign countries but not yet delivered. Since lend-lease deliveries were no longer possible, these goods were in many cases sold to our Allies on credit. Third, soon after the end of the war the government of Great Britain applied to the government of the United States for a loan of \$3,750,000,000, and it was rather expected that the governments of other countries would make similar applications. Finally, the foundation of the International Bank for Reconstruction and Development seemed to open up a wide field for foreign investments on the part of the United States. The latter two matters warrant further comment.

The Loan to Britain. As agreed upon by the two governments, and ratified by the British Parliament and the Congress of the United States, the loan to Britain involved \$3,750,000,000 of "new" capital. The British obligation to repay, however, amounted to \$4,400,000,000 exclusive of interest, with the extra \$650,000,000 constituting the sole return to the United States for some 25 billion dollars' worth of *net* lend-lease deliveries made to the British Empire during World War II. The loan was to be spent largely in the United States for machinery, raw materials, food, and other commodities and services. Repayment was scheduled to be made

⁹ National Industrial Conference Board, *The Economic Almanac for 1945-46*, New York, 1945, p. 306.

in fifty installments, beginning December 31, 1951, and with interest at 2 per cent from that date on.

Great Britain was said to need the loan because the war had greatly reduced her ability to pay for needed imports. Her export trade had been seriously curtailed, she had been forced to sell part of her foreign investments, and many of her ships had been sunk by enemy action. The loan was expected to tide her over the period necessary for rebuilding her foreign trade, and to restore her ability to perform the services she formerly rendered to other countries. It was argued that, if Great Britain were unable to secure this loan from us, she would be compelled to continue and increase the use of restrictive measures and devices, such as high tariffs, preferential tariff agreements within the empire, the sterling bloc, exclusive bilateral trading arrangements, private international cartels, quotas, export and import licensing, and exchange controls. Such a policy on the part of Great Britain would go far toward defeating international plans for the stimulation of trade and the stabilization of monetary and exchange relationships between countries.

Besides agreeing to repay the loan with interest, Great Britain promised to enter into negotiations for the reduction or elimination of various trade barriers, such as those mentioned in the preceding paragraph, and to participate in an International Conference on Trade and Employment which, it was hoped, would reach an agreement on an international code covering trade barriers, restrictions, and discriminations, and would blueprint an International Trade Organization that would work in close relation with the Economic and Social Council of the United Nations. More specifically, Great Britain agreed that, if the loan were made, she would not restrict payments to the United States for export or other current transactions, she would end most exchange controls within a year, and she would discontinue the use of import quotas in a way that would discriminate against American traders, save under specified exceptional circumstances, by the end of 1946 or earlier.

The loan to Britain was not altogether popular in the United States, despite a strenuous propaganda effort in its behalf by our government. The benefits of the loan to Great Britain were deemed immediate and substantial, while the resultant gains to the United States were considered to be vague, indefinite, and deferred, though potentially important. Though the terms of the loan were considered harsh by many British citizens, they appeared excessively mild to some people in the United States. There was some doubt that the loan was a sound credit transaction, or that it would have been seriously considered by any agency except our federal government. The payments of principal and interest were spread over such a long period of time and were hedged about with so many restrictions and qualifications that many people doubted that they would ever be made. Hence, it was held, the loan should be considered

and evaluated as an outright gift. In view of our past experience, it was perhaps understandable that some of our citizens should be a bit cynical about a loan made by the federal government to the government of another country.

The International Bank for Reconstruction and Development. The Bretton Woods Agreement, as ratified by forty-five countries by the end of 1947, provided for the International Bank for Reconstruction and Development as well as for the International Monetary Fund. The Bank has an authorized capital of 10 billion dollars, and by the end of 1947 over 8 billion dollars had been subscribed by the countries which had accepted membership in the Bank. The United States has made the largest contribution (\$3,175,000,000) to this capital, followed by the United Kingdom, China, France, and other member countries. The Bank can call upon member countries to pay in 20 per cent of their subscriptions; the other 80 per cent will be held in reserve by the member countries, to be called for only when it is required for the purpose of covering losses sustained by the Bank.

The Bank is to be controlled and managed by a Board of Governors, Executive Directors, a President, and other necessary officers and staff. Each member country will appoint one Governor to the Board, and the voting power of the individual Governors will be determined in the same way as in the case of the International Monetary Fund. There will be twelve Executive Directors, who will serve two-year terms. Five of these Directors will be chosen by the five countries that make the largest contributions to the capital of the Bank, and the other seven by the other member countries. The President of the Bank is the equivalent of the Managing Director of the International Monetary Fund, and he will have an Advisory Council of seven members chosen by the Board of Governors to represent banking, commercial, industrial, labor, and agricultural interests.

The stated objectives of the Bank are: (1) to assist in the reconstruction and development of the territories of members by facilitating the investment of capital for productive purposes, including the restoration of economies destroyed or disrupted by war, the reconversion of productive facilities to peacetime needs, and the encouragement of the development of productive facilities and resources in the less developed countries; (2) to promote private foreign investment by means of the guaranty of or participation in loans and other investments made by private investors and, when private capital is not available on reasonable terms, to supplement private investment by providing, on suitable conditions, funds out of its own resources; (3) to promote the long-range balanced growth of international trade and the maintenance of equilibrium in balances of payments by encouraging international investment; (4) to arrange the loans made and guaranteed by it in relation to international loans made

through other channels so that the more urgent and useful projects will be dealt with first; and (5) to conduct its operations with due regard for the effects of international investment on business conditions in the territories of member countries and, in the immediate post-war years, to assist in bringing about a smooth transition from a wartime to peacetime economy.

As some of these statements suggest, the Bank may make or facilitate international loans in three ways. First, it may make direct loans out of its own funds, using the 20 per cent of its capital actually paid in by or on immediate call from the member countries. Second, the Bank, with the approval of the member countries in whose financial markets the funds are raised, may borrow funds which can then be converted into other currencies or into gold and used for direct loans. In providing foreign exchange for a borrower, the Bank must give him the particular currencies which he requires. It will not give him dollars unless he needs dollars to spend in the United States. On the other hand, a borrower cannot acquire currencies from the bank for the purpose of selling them in the exchange markets for other currencies.

The Bank determines the interest rate, the amortization payments, the maturity, and the commission to be charged, in connection with direct loans of either type. The charges and the repayment schedule must be reasonable and appropriate to the projects financed. Repayments of principal and payments of interest and commission must be made in currency of the borrowers which has a value equivalent to the dollar value assigned to these payments when the loans were made. Third, international loans may be made by private investors and agencies through the usual investment channels and be guaranteed by the Bank. Loans of this type must meet conditions similar to those prescribed for direct loans. The Bank must receive suitable compensation for its risks in guaranteeing loans. For the first ten years the commission charged on such loans must be between 1 and 1½ per cent, but it may be lowered thereafter. All payments of commission received by the Bank must be kept as a reserve.

If the Bank functions according to schedule, its operation will tend to push the United States to the forefront as a creditor nation. Clearly the Bank could not function extensively in the field of international loans and investments with 20 per cent of its own capital. Equally clearly, no country except the United States will be in a position to do much international lending for years to come. If the Bank is to raise funds in the markets of a member country in order to make direct loans to other countries, the country supplying the funds is almost certain to be the United States. Similarly, the international loans made by private investors and guaranteed by the Bank are almost certain to originate in the United States.

After members of the Board of Governors, the Executive Directors, and the President had been chosen, the Directors decided upon June 25, 1946,

as the date upon which the Bank would formally begin operations. The first annual meeting of the Board of Governors was held in Washington in September, 1946, and a few countries which were not among the original signatories of the Bretton Woods Agreement were admitted to membership. By the end of May, 1947, the Bank had called in all of the callable 20 per cent of members' subscriptions and had made its first loan (of 250 million dollars) to the Credit National, a semi-public corporation in France. This loan, guaranteed by the French government, is of 30 years' duration and bears 3 per cent interest and 1 per cent commission. Other countries were expected to follow France's example.

Future Prospects. It is difficult to evaluate the policy of the United States in apparently committing itself to become once more a creditor nation on a large scale.¹⁰ Certainly there is little in our experience in the field of foreign loans and investments to commend such a policy. Our past mistakes in this field are fairly obvious. We have bought risky, high-interest foreign bonds from issuing governments already overburdened with public and private obligations to other countries. We have bought the bonds of countries which were notorious as graveyards for foreign investments and as defaulters on their obligations. In short, we have loaned to foreign governments when we would never, as private business men, have extended credit to prospective borrowers under similar conditions. We have been willing to purchase the securities of foreign companies with high-sounding names without any knowledge of their financial condition, present business, and future prospects. Undoubtedly, there is a certain glamour about a foreign investment, but glamour scarcely compensates the investor for the loss of principal or interest, or both. Even our direct investments abroad have sometimes indicated poor judgment, if nothing worse.

On the other hand, despite the mistakes of the past, there are legitimate and valuable functions to be performed by foreign loans and investments. They aid in the development of new countries and backward areas. Thus they facilitate the extension of international specialization, or division of labor, and make for an increase in world production, markets, and trade. Foreign investments also contribute to the maintenance of a sound international financial system based on the gold standard or some other mechanism such as the International Monetary Fund. They help to smooth out temporary disequilibriums of imports and exports, to distribute the world's gold supply among the nations, and to stabilize foreign exchange rates. They are, or might well be, a tie binding the nations of the world together. Finally, they will be badly needed in the post-war period to help

¹⁰ By the middle of 1947, post-war foreign loans of the United States already amounted to about 13 billion dollars, and President Truman in December, 1947, recommended further foreign grants and loans, under the Marshall Plan, amounting to 17 billion dollars.

devastated and war-torn countries to rebuild and get on their feet once more.

The successful functioning of the various international organizations which have been set up recently would go far toward making foreign loans and investments both safe and profitable for the United States. It would be most unwise and unsafe for us to make large new loans and investments abroad while maintaining our old high tariff policy. If we did this, the new loans and investments would for a time make it possible for this country to export heavily while importing lightly. Eventually, however, the annual payments to be received on account of old loans and investments would exceed, by a large sum, our new annual loans and investments, and the safety of our creditor position would be gravely endangered under the high tariff policy. We should not become a great international creditor unless we are willing to accept the responsibilities of a mature creditor nation. Fortunately, however, the International Monetary Fund, the Economic and Social Council of the United Nations, and the proposed International Trade Organization are all expected to work for the lowering or elimination of tariffs and other obstacles to international trade; and the United States, in common with other nations, will have to trade more freely than formerly in order to live up to her responsibilities in connection with these organizations.

Again, large foreign loans and investments would be unwise and unsafe if international monetary relationships and foreign exchange rates remain as unstable in the future as they were during the 1930's. Foreign investments should not be made unless our prospective investors can know, with a fair degree of certainty, at what rate the earnings of foreign properties can be converted into dollars, and what the dollars will be worth when they get them; and until they are assured, further, that some foreign dictator will not destroy the value of their investments by taking over the direct control of properties or forbidding the payment of interest on foreign-owned bonds. Moreover, if we felt that international economic conditions made it imperative for the United States to continue to use a managed currency, so that the dollar had no fixed value in terms of foreign currencies though it might have a fairly stable purchasing power at home, the prospects of our making large new foreign loans and investments would be anything but bright. Here again, however, we should recall that it is one of the major objectives of the International Monetary Fund to stabilize monetary systems and foreign exchange rates and to eliminate managed monetary systems, currency depreciation, foreign exchange controls, and other devices which contributed to the unsatisfactory conditions of the 1930's.

Finally, large foreign loans and investments on the part of the United States would be unwise and unsafe on the basis of our former foreign investment judgment and standards. Our investors have needed to learn

that a poor investment is not sound merely because it is made outside the United States. And they have needed to understand that foreign investment is always risky and that, in appraising prospective foreign investments, they should apply standards which are even more severe and rigid than those applied to domestic investments. The new international organizations may help in this connection also. The International Bank for Reconstruction and Development is intended to operate conservatively. The Bank and the Fund will have adequate information on the member countries in connection with such things as holdings of gold and foreign exchange, gold production, imports and exports, prices, and production. On the basis of such information, it should be possible to estimate a country's credit needs and evaluate its status as a credit risk more accurately than in the past. We should be able to avoid the overlending to particular countries in which we have indulged on former occasions. And private investors and banks in this country, in turning funds over to the International Bank for the making of direct loans or in purchasing securities guaranteed by the Bank, may be much safer than they were in the past when they had to rely largely on their own judgment and information in making foreign loans and investments.

Thus, the success of the United States as a creditor nation in the post-war period seems to depend on the functioning of the international organizations to which this country has become a party. If these organizations operate well, the United States may have a long and profitable career in the field of foreign loans and investments. If not, the outlook is anything but promising. Some people fear that the International Bank itself may operate to the disadvantage of the United States. Since the United States will be the only important lending country for some time to come and since the other member countries will have a great majority of the voting power, it is said that we shall have here a bank controlled by its borrowers—which, it is claimed, is like having an insane asylum controlled by its inmates. That is to say, it is feared that the Bank, as controlled by the borrower nations, may use our funds to make unsound loans on inadequate security. If this fear actually becomes a reality, we should find ourselves once more a sadder but wiser ex-creditor nation after a few years.

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1. What is meant by an "export of capital"?
 2. How does a persistent net outflow of capital affect the foreign exchange market? How does it affect international trade?
 3. What are the economic effects of a persistent net inflow of payments on the long-term capital account?
 4. In what respect did the international financial position of the United States change between 1914 and 1919? Between 1919 and 1930? Explain.
 5. How were World War I debts created?

6. "The war debts to the United States differed from other international debts in some respects." Do you agree? If so, why?
7. Describe the war debt funding agreements.
8. Did it seem likely, as of 1930, that the war debts would be paid? Explain.
9. Could the United States have received the war debt payments under a continuation of her traditional tariff policy? Explain.
10. Show how the necessity of receiving large annual payments on account of private loans and investments abroad complicated the problem of receiving the war debt payments for the United States.
11. "The fact that war debt and reparations payments were made and received, prior to 1930, indicates that they could have been made and received after that date." Do you agree? Explain.
12. Explain carefully the significance of the private foreign loans and investments made by the United States between 1919 and 1930.
13. What happened to the war debts after 1930, and why?
14. "In the decade after 1930, the creditor position of the United States virtually disappeared." Explain.
15. Distinguish between "direct" and "portfolio" investments.
16. Why did the actual value of the private foreign loans and investments of the United States decline after 1930?
17. Show how certain developments between 1935 and 1940 affected the creditor position of the United States.
18. Why was there no extension of the creditor position of the United States during World War II?
19. "After the end of World War II, there seemed to be an excellent chance that the United States would soon become a large-scale creditor nation once more." Explain.
20. Indicate the terms and significance of the loan from the United States government to Great Britain.
21. What are the objectives of the International Bank for Reconstruction and Development?
22. How is the International Bank supposed to operate? Explain.
23. "The International Bank may make or facilitate three types of international loans." Explain.
24. Why will the operation of the International Bank tend to push the United States to the forefront as a creditor nation?
25. What grave mistakes have we made in the past in the field of foreign investments?
26. What are the functions of foreign investments? Explain.
27. "The successful functioning of the various international organizations which have been set up recently would go far toward making foreign loans and investments both safe and profitable for the United States." Explain.
28. What should be the post-war policy of the United States with regard to foreign loans and investments? Explain.

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The Economic Interdependence of Nations

MANY PUZZLING ECONOMIC PROBLEMS HAVE ARISEN FROM THE FACT THAT population tends to expand while the amount of land—this term including all natural resources—is fixed. Well over a hundred years ago, when Thomas Robert Malthus was formulating his statement of the tendency of population to outrun the means of subsistence, it appeared that the population of Great Britain and other countries had nearly reached the maximum which could be supported. The present population of Great Britain, however, is about four times that which had appeared so large at the beginning of the nineteenth century, and the population of the world as a whole has more than doubled in the same period of time.

INDUSTRIALIZATION AND ECONOMIC INTERDEPENDENCE

In fact, at the very time that Malthus was writing, a movement was under way which was to go far toward affording a solution for the difficulties which he saw and feared, although the solution brought with it new problems, among which is that discussed in the present chapter. The movement referred to was the speedy growth of industrialization, and its early events were so spectacular that it has long been called the Industrial Revolution.

The Case of Great Britain. It is a well-known fact that a country of given size and resources can support a much larger population through industrialization than through agriculture. Great Britain, for example, had great difficulty in providing food for her relatively small population a century or more ago. In recent years, however, she has been able to support many more people on a considerably higher standard of living. This has been accomplished by getting from other parts of the world one-half to two-thirds of her foodstuffs, as well as large quantities of other basic materials, such as petroleum, copper, lead, wool, cotton, sulphur, aluminum, zinc, rubber, manganese, nickel, chromite, tungsten, potash,

phosphates, antimony, tin, mercury, and mica.¹ The chief economic activity of Great Britain, apart from the mining of coal, has been manufacturing. The manufacturing industries have provided enough goods to supply the domestic market and still leave a large surplus to be exported in payment for heavy imports of raw materials and foods.

German Industrialization and Dependence. The industrialization of Germany has developed since the formation of the German Empire in 1871. Since that time, Germany has experienced a growth of more than 50 per cent in population,² the concentration of large masses of the people in urban districts, the development of a wide variety of manufacturing industries, a tremendous expansion in foreign trade, and the formation of many large business combinations, or cartels. These changes made it possible for the increased population of the country to enjoy a higher standard of living than prevailed in former years, but this progress was obtained at a cost. That is, Germany in pre-fascist days was dependent upon other countries for a fifth or more of her food, including as much as half her total consumption of fats, and for large quantities of industrial materials as well. She had abundant domestic supplies of coal, nitrates, and potash, and less adequate supplies of iron ore, lead, and zinc, but had to import all or almost all her petroleum, copper, sulphur, aluminum, cotton, wool, rubber, manganese, nickel, chromite, tungsten, phosphates, antimony, tin, mercury, and mica.³

The Position of the United States. Economic self-sufficiency on a natural basis is probably as nearly realized in the United States as in any other country, except possibly Soviet Russia, but even this country is dependent upon others for a wide variety of essential products. As the industrialization of the United States has become more complete, the trend in our imports has been more and more toward raw materials and foods and away from manufactured products, while the latter have become an increasing part of our exports, replacing raw and semi-finished goods. The United States can ordinarily produce all the coal, iron ore, petroleum, copper, lead, sulphur, cotton, zinc, phosphates, and mica she needs; is less well supplied with nitrates, aluminum, wool, and mercury; and must import rubber, manganese, nickel, chromite, tungsten, potash, antimony, tin, and other essential raw materials.³ We are at least partly dependent upon other countries for tea, spices, coffee, tobacco, wood pulp, hides, silk, jute, hemp, sisal, quinine, and iodine.

The Problem of Economic Interdependence. As we have seen, it has been decided in many countries that the economic welfare of their large

¹ P. T. Ellsworth, *International Economics*, New York, The Macmillan Company, 1938, p. 504.

² Statements in this introductory section, relating to population and resources, describe the situation which prevailed prior to Germany's attempt to establish a "New Order" in Europe.

³ P. T. Ellsworth, *International Economics*, p. 504.

and growing populations could best be cared for by placing their chief economic reliance on manufacturing. This has made it necessary for these countries to look to other lands for large quantities of foodstuffs and raw materials for manufacturing, both because no country is suited for producing all essential materials for itself, and because in many of them the soil cannot be made to furnish sufficient food to provide for the needs of the very dense populations. At the same time, markets for large quantities of manufactured products must be found in other countries, so that payments for the incoming foodstuffs and raw materials can be made.

Large-scale production has become the rule in the industrial countries and has made possible the realization of many economies. On the other hand, however, it has required large investments of capital and has brought heavy fixed costs, which make it imperative that the industries be operated continuously and as close to full capacity as possible. This, in turn, has made it necessary that the flow of raw materials be ample and constant, and that markets be ever available in which the products of industry can be sold. The dependence of the nations of the world upon each other for raw materials and markets, and their struggles to obtain and to retain control over these materials and markets, constitute the problem of the economic interdependence of nations.

THE QUEST FOR COLONIES AND CONCESSIONS

With several nations undergoing a process of rapid industrialization at one time and realizing more and more keenly the need for foreign markets and importations of raw materials and foods, it is not surprising that these countries cast many a covetous eye at the more backward areas of the world which seemed capable of furnishing markets and materials, and possible homes for surplus populations. However, the needs of the industrial countries were so urgent that these nations declined to leave the development of backward areas to chance or to a competitive struggle between the rivals. Instead, each country sought to reserve areas for its exclusive colonial development. This does not mean that all colonies have been established because the mother countries needed foods, materials, markets, and relief from population pressure, for many other motives—sentimental, religious, and political—have led to colonization. It may safely be said, however, that these economic needs were a major factor in the struggle for colonies which marked the last few decades before World War I.

Results of the Search for Colonies. As so often happens in economic and other contests, the most advantageous positions in the colonial field were taken by the early comers. The process of industrialization began first and developed most rapidly in England, and it forced an early recognition of the need for outside sources of food and raw materials, as well

as for outlets for surplus population and manufactured products. The securing of colonies was considered to be the simplest means of satisfying these wants, and through colonization the British Empire was made to grow by leaps and bounds. It was for many years, if considered as an economic unit, the most nearly self-sufficient political entity in the world. However, for certain purposes, the empire cannot be considered as a unit.

France also got an early start in the race for colonies, but she finished well behind the leader, England, in the quality and quantity of colonies that she finally controlled. Germany and Italy, who started late in the race for colonies, did not secure many rich colonial prizes. Both of these countries obtained colonies, largely in Africa, but they were for the most part areas which were not particularly desirable. Germany, of course, was stripped of her colonies following World War I.

The Economic Development of Colonies. The degree of control exercised over the economic development of the colonies has varied greatly among the mother countries. Some colonies have been left free to develop in their own way, while almost every phase of the economic life of others has been dictated by the nations in control. Quite often the mother country has definitely encouraged the production of essential foodstuffs and materials, or has discouraged the growth of industries which would compete with those already established at home. In any case, colonies have usually been furnished with capital for development through loans or direct investments, and have been aided in building transportation systems and securing credit facilities. The foreign trade of colonies is often controlled in the interests of the mother countries, which sometimes spend large sums to induce their citizens to emigrate to the colonies. Such inducements may include direct economic incentives to the emigrating people, free maintenance of law and order, and improvements designed to make life in the colonies attractive to prospective colonists.

Preferential Tariffs. The methods by which nations attempt to reap the greatest possible economic benefits from their colonial possessions vary from case to case. One common method is the use of a preferential tariff system. Under such a system, lower duties are applied by the colony to products coming from the mother country than to identical products coming from other sources. Similar discriminations are made by the mother country in favor of the colony. Thus, the industries of the mother country are given the privilege of marketing their goods in the colony upon more favorable terms than those granted to producers in other countries. Whether or not this is a great advantage will depend, however, upon the size of the preferential duties, which may still be sufficiently high to give protection to colonial industries.

While important raw materials are allowed considerable freedom of entrance by most industrial nations, it is often possible for a colony to derive much benefit from preferential duties applied to its products by

the mother country. If, for example, the mother country is applying protective duties to certain foodstuffs and raw materials in order to stimulate domestic production, or if it levies high duties on certain foodstuffs for revenue purposes, preferential duties may be a distinct advantage for a colony. Preferential tariffs exist, or have existed, between Spain and her colonies, Portugal and her colonies, France and some of her colonies, and within the British Empire.

Preferential duties, however, are not always on imports. Preferential export duties are often applied to raw materials, and are a menace to amicable trade relations between nations. The purpose of such duties may be in part to encourage shipping and trade, but it is primarily to stimulate industry in the mother country by furnishing it with raw materials on favorable terms. A preferential export duty is simple in application. A certain amount is collected for each unit of the raw material exported, and a part or the whole of this amount is given back if the destination of the export is the mother country, or if it can be shown that the next process in the utilization of the material will be or has been performed in the mother country or another colony.

One example of a preferential export duty was that of India on untanned hides and skins. In 1919 an export duty of 15 per cent was applied to these articles, and a rebate of two-thirds of this amount was allowed on exports to be tanned within the British Empire. This preferential duty affected American tanners adversely, aroused much resentment, and caused considerable trade to be diverted to other markets. The duty was changed in 1923 so that it affected all countries equally.

As has been said, preferential tariffs are often ineffective because even the preferential rates are so high that little advantage is given to the country that is nominally favored. To the extent that a real benefit is conferred, ill feeling and retaliation by other countries are likely to result. The President of the United States, for example, has had the power to impose additional duties on or even to exclude products coming from any country which discriminates against our commerce.

Assimilated Tariffs. When the tariff policy of the mother country toward the colonies is that of assimilation, discrimination against other countries is complete, for under this policy the colonies are made a part of the mother country for tariff purposes. This means that colonial raw materials, which are subject to an export tax when shipped to other countries, pass to the mother country without interference. At the same time, both colonies and mother country may send goods to each other without fear of import duties, whereas goods from other countries attempting to enter either mother country or colonies run up against the tariff wall of the mother country, within which the colonies are included. The policy of assimilation has been applied by the United States to Puerto Rico, Hawaii, and Alaska, and by France to many of her colonies.

Protectorates. When industrial nations have deemed it impossible or unwise to secure complete control over a backward area through colonization, they have been able at times to accomplish some of their ends through the development of protectorates. A protectorate exists when one state, usually by treaty, gives to another and stronger state a considerable degree of control over its foreign relations, or possibly the right to intervene in its domestic affairs under certain conditions, in return for a guaranty of protection.⁴ Protectorates have often been set up when an industrial nation has hesitated to take the military action necessary to bring a backward area under complete control or when an attempt at annexation might have aroused the opposition of other industrial powers. Protectorates have, in general, furnished a rather unstable type of control over backward areas, for they have usually become outright colonies in due time or have achieved their independence.

However, they have, in their time, given the protecting nations certain important advantages. The protected countries have often agreed not to conclude any treaties with other countries, obtain any loans from other countries, or make concessions to the citizens of other countries without the consent of the protecting countries. The latter are often allowed to maintain troops in the protected areas, appoint governor-generals, and safeguard the personal and property rights of the citizens of the protected country who are located in other lands.

Mandates. Some control over the development of backward areas has been enjoyed by certain nations under the so-called mandate system. This system developed after World War I under the auspices of the League of Nations. Under a mandate, an advanced state held a backward area in trust for the League of Nations, helping to administer its affairs until it was able to stand by itself. The mandatory state was expected to administer the controlled area for the benefit of the people of that area and not for its own advantage, and to maintain the "open door" policy with respect to other nations. That is, other nations were to be allowed to do business in the mandated territory, to make investments there, and to receive concessions for the development of resources. However, some advantages of an economic character were almost certain to be enjoyed by the mandatory nations from their control over backward areas.

Concessions. Even in the absence of political control, it has often been possible for industrial nations to achieve a measure of control over backward areas by means of concessions. A concession is a grant of power, usually given by a country in which governmental control is weak and which is undeveloped economically, to individuals or companies of other countries to utilize mineral resources or otherwise develop an area, subject to certain rules and restrictions imposed by the granting country. Conces-

⁴ *Encyclopædia of the Social Sciences*, New York, The Macmillan Company, 1934, vol. xii, pp. 567-571.

sions may be granted for a variety of purposes, but the most important are probably plantation, mineral, and petroleum concessions.

While concessions are not usually made directly between nations, it is nevertheless true that national governments are greatly interested in concessions granted to their nationals. The struggle for the oil reserves of the world has been particularly keen since the importance of petroleum in the operation of naval vessels and airplanes, and in many other uses, has been apparent. Access to adequate oil resources has appeared to be almost a matter of national life or death. A few years ago Great Britain, besides being closely affiliated with the Royal Dutch-Shell oil interests and insisting that the Turkish Petroleum Company's operations should be British-controlled, owned a majority of the shares of the Anglo-Persian Oil Company.⁵ This company had a blanket concession which gave it control over the oil resources in all of Persia except five northern provinces. It also owned in part the Burma Oil Company, which was prominent in the Burma field where the British had a monopoly. Concessions for the development of the oil resources of Mesopotamia have changed hands several times. These resources have been exploited by a British-controlled company, with American and French oil companies participating.

The Netherlands has been directly interested in the Royal Dutch-Shell group, which had a virtual monopoly of petroleum production in the fields of the Dutch East Indies, as well as important concessions in South and Central America. While the government of the United States is not so directly interested in American oil companies as are the governments of Great Britain and the Netherlands in their respective companies, it is nevertheless true that our government has been much concerned over the difficulties experienced by American companies in gaining a foothold in the newer oil fields which hold much of the oil supply of the future. Moreover, during World War II, the United States became actively interested in assisting with the development of the oil resources of some South and Central American countries and other areas.

The development of many of the important mineral resources of the world has taken place under concessions. In China, Mexico, and Latin America, concessions have often been granted for the exploitation of minerals by outsiders. The rich resources of Central Africa, which include copper, gold, diamonds, tin, iron, bauxite, and many other minerals, have also been developed under concessions of enormous size, held chiefly by companies under the control of Belgian and British capitalists.

Modern Imperialism. The international struggle for raw materials, markets, and outlets for surplus population is not confined to the distant past, for we have recently had a number of modern examples of imperi-

⁵ C. K. Leith, *World Minerals and World Politics*, New York, McGraw-Hill Book Company, Inc., 1931, pp. 87, 88.

alism. Some countries have been content merely to try to obtain economic control over areas that are economically backward, but others have apparently been ready and willing to conquer, annex, and control politically any areas on which they could lay their hands.

In September, 1931, Japan overran Manchuria and Jehol Province in China, and soon gained control over some 365,000 square miles of territory, much fertile agricultural land, mineral resources, and a population of 30 to 34 million people. Later, the area was set up as a nominally independent state under the title of Manchukuo, but there was no doubt that it had become, in effect, a Japanese province. Again in 1937, and presumably because of an anti-Japanese "incident," Japanese armed forces invaded China and in the next few years conquered large additional sections of the country. According to Japan, her activities in China were purely defensive, but this was clearly an attempt to dress up the wolf of imperialism in sheep's clothing. Finally, in a relatively short time after December 7, 1941, Japan's armed might gave her control over the Philippine Islands, additional areas in China, British Malaya, the Dutch East Indies, French Indo-China, Thailand, and other areas. These adventures brought her, but only temporarily, many millions of square miles of territory, hundreds of millions of people, and many rich sources of vital materials such as rubber, tin, and petroleum.

In October, 1935, Italy undertook to "protect" Italian lives and property from the "barbaric" Ethiopians, and to avenge certain "border outrages" which had allegedly proved humiliating to her national honor. By May, 1936, she had conquered the whole of Ethiopia in "self-defense," and annexed it to Italy. This conquest brought her an area of 350,000 square miles, with a population of 10 millions, and extensive agricultural and mineral resources. A little later, Italy found it necessary, for similar reasons, to conquer neighboring Albania, securing an additional 17,500 square miles of territory and about a million people. These gains, and others acquired later, were stripped from her when she retired most ingloriously from World War II in 1943.

Germany's territorial gains after 1939 were far more impressive than those of Italy. Deprived of her colonies under the Versailles Treaty, and with her vital foreign trade at low ebb, Germany under National Socialism rose in her military might to seize food, raw materials, markets, industrial equipment, and "living room" in general. By actual military conquest or by intimidation, she brought Norway, Denmark, Belgium, the Netherlands, Austria, Czechoslovakia, Hungary, Roumania, Bulgaria, Yugoslavia, Greece, Poland, France, much of Russia, and other areas under her dominion. If Germany could have retained all the regions over which she gained temporary control, her area would have been increased by well over a million square miles, her population by several hundred million people, and her resources by riches that can hardly be estimated. Actually,

of course, these gains and more too were lost in the course of World War II, and Germany was visited with a destruction from which she will be a long time recovering.

THE FRUITS OF IMPERIALISM

In general, it is necessary to conclude that the results of imperialism have been rather unsatisfactory. Nations have gained much by industrialization and by drawing upon other parts of the world for food, raw materials, markets, and relief from population pressure, but they have gained relatively little through their attempts to reach these ends by conquest, annexation, and exclusive control. In support of this conclusion, let us examine in turn the advantages which nations are supposed to derive from their colonies or other controlled areas.

Relief from Population Pressure. In many cases, the colonies acquired by industrial nations have served but poorly as outlets for surplus population. As one writer puts it, Italy exhausted herself for many years before World War I to obtain colonies, but when in 1914 the war broke out there were only 8000 Italians in all of her African colonies—a smaller number than lived within a radius of a quarter of a mile of Cherry Street, New York City, and only 2 per cent of the Italian population of the State of New York.⁶ He suggested that, if Italy had both control over Ethiopia and freedom of immigration to the United States, 500 Italians would come here annually for every one that went to Ethiopia.

Germany's experience was similar, according to this writer. By 1914 she had only 22,000 German colonists in her 900,000 square miles of African colonies, and only 2000 more in all the rest of her colonies. At the time, there were more than 24,000 Germans between 80th and 90th Streets on Manhattan Island, and 25 times as many in New York State. Japan, at a cost of 300,000 men, won South Manchuria from Russia in 1905. Twenty-five years later there were only 200,000 Japanese in this territory, or fewer than were killed in the war, and only one-third of the annual increase in the population of Japan.

There is considerable evidence to show that the inhabitants of advanced countries are much more likely to move to other independent civilized countries than to their own colonies. Many colonies acquired by nations in recent years are almost uninhabitable for the people of these nations, or are already densely populated by natives. Even when conditions in the mother country and colony appear to be fairly similar, it is often difficult to stimulate emigration. Thus, the Japanese declined to emigrate to South Manchuria because of lower standards of living there, because the climate was somewhat more rigorous, and because their favorite food,

⁶ Nathaniel Peffer, "The Fallacy of Conquest," *Harper's Magazine*, January, 1936, pp. 129-136.

rice, could not be grown readily in all parts of the colony—and this despite the expenditure of large sums by the Japanese Oriental Development Company to encourage emigration. Of course, some nations acquired colonies long ago which were more suitable for colonization, but most of the recently acquired colonies have failed to attract large numbers from the mother countries.

We may also note here the fact that the nations which, in the last few years before World War II, talked most and loudest about the pressure of population and the need for room to expand—such as Italy, Japan, and Germany—were not, after all, unusually densely populated. Before entering on their campaigns for expansion, these three countries had a population of 133, 135, and 140 persons, respectively, to the square kilometer, while Holland, England, and Belgium had 232, 264, and 266, respectively.⁷ There were, to be sure, some differences between these countries in their per capita holdings of arable land and natural resources. But it is likewise true that those countries which complained most about population pressure seemed to go out of their way to increase this pressure by attempting to raise the birth rate.

Food and Raw Materials. The value of colonies as sources of food and raw materials has been somewhat greater than their value in providing relief from population pressure, but even here it is easy to overestimate their importance. While access to raw materials is vital to industrial nations, it should be remembered that colonies do not grant monopoly privileges, but merely give the mother countries first claim upon such materials, plus some profit from their exploitation. Very seldom do the colonies of any one country have anything approaching a complete monopoly over an important raw material or resource; and even if they should have exclusive control, the abuse of such monopoly power would almost surely lead to retaliation by other nations. Control over raw materials is of little use to an industrial country unless it has markets for its manufactured products, and these depend upon the development and efficiency of its industries. If a country is so efficient industrially that it can command foreign markets, it can usually secure its raw materials and foods more cheaply by purchasing them in the world markets than by conquering and developing colonial sources of supply.

Indeed, individual industrial countries have seldom found themselves discriminated against in the matter of access to foods and raw materials, except in times of war. Colonies often favor the mother countries in such matters, but usually furnish these products to all other industrial nations on equal terms. At times, the control of the raw materials of colonies has made things difficult for all industrial nations save the mother country, but not for any country in particular. But, it may be asked, are not

⁷ *The Economist*, London, England, April 18, 1936.

colonial sources of supply important in time of war when other sources are cut off? The answer is that such sources of supply are of little value at such times unless the mother country controls water or land routes to its colonies, and such control is often exceedingly difficult to maintain.

Markets. Colonies are of some value as markets for products of the mother countries, but here again their importance is easily exaggerated. Colonial trade is often captured by foreign countries which have the special advantages of unusual efficiency or of favorable location with respect to the colonies. We may cite, by way of example, the inroads of the Japanese textile industries upon the trade of the British colonies. Moreover, colonies in their original state are of little use as markets for the mother country; and an economic and industrial development which would enable them to buy extensively from the mother country is likely on the contrary to make them better able to supply their own needs.

This point is illustrated by the fact that, by 1934, Japan was already reported to be uneasy about the development of new industries in Manchukuo which had begun to compete effectively with similar industries in Japan. Low wages in Manchukuo were said to have given that country advantages in the production of iron and steel, flour, soya bean products, and brewery products. Japan was particularly disturbed over plans for new cotton and wool mills in Manchukuo.⁸ In any case, the extent of colonial trade would be difficult to underestimate. In 1934, England's trade with her colonies, except those which were wholly or partly self-governing, amounted to only 10 per cent of her exports and 7 per cent of her imports, while Germany's colonial trade in the pre-war years of 1912 and 1913 amounted to but six-tenths of one per cent of her exports and one-half of one per cent of her imports.⁹

The Question of Concessions. Concessions obtained by industrial nations in regions which are not politically controlled often appear to be economically justifiable. They may permit the development of backward regions, while retaining a considerable degree of control for, and bringing in some revenue to, the conceding government. To avoid controversy, they should be given for definite periods of time and for well-defined areas only, with adequate safeguards for the nations granting the concessions. It is particularly important, moreover, that they be granted according to the principle of the "open door." That is, the people of different nations should all have opportunities to obtain these privileges. When concessions are inexactly defined, and unequal opportunities are given to the people of different nations, international rivalry is stimulated and bitter diplomatic conflict often results, which may at any time lead to more serious international conflict. The United States has often been involved in trying to protect American concessions and concessionaires in backward

⁸ *Ibid.*, June 9, 1934.

⁹ *Ibid.*, April 18, 1936.

areas from hostile treatment by the governments of these regions, or from the depredations of bandits or revolutionary elements. We have at times landed our marines and engaged in actual combat with armed forces which presumably endangered the safety of our properties and citizens, and have taken over or supervised the revenue systems of backward areas in order to safeguard our interests. Such activities are, of course, dangerous from the international point of view.

Final Estimate of Imperialism. In general, then, the fruits of imperialism have not come up to expectations. Often the policies of industrial nations in backward areas have failed to bring these nations the expected economic advantages. And when successful in this respect, they have frequently led to international friction and ill feeling, and to the development of retaliatory policies and devices. Doubt and fear pervade the atmosphere in a world where the distribution of vital supplies of food and raw materials is left to such devices as discriminatory tariffs, imperialistic policies for undeveloped areas, and monopolies and controls over raw materials. Moreover, international resentment is likely to lead nations to substitute a suddenly destructive course of action for one which is only gradually destructive of economic welfare. In other words, economic warfare may give way to military warfare, undoubtedly to the lasting detriment of all the nations concerned. In the modern world it is silly for any nation to attempt to acquire important territories and resources by military conquest unless that nation is capable of conquering and subduing the world as a whole. And this task, as the two major wars of the twentieth century have indicated, appears to be an insuperable one.

ECONOMIC SELF-SUFFICIENCY

In following a policy of economic self-sufficiency, a nation attempts to produce within its own boundaries all the goods which are necessary to its economic life. Such a policy may be regarded in part as an alternative to imperialism, and in part as preparation for and a tool of war and imperialism. The fascist economies of Italy and Germany were noteworthy for their pursuit of this policy, and we shall draw upon them in illustrating and appraising it.

Increases in Production. A program of economic self-sufficiency is likely to include three parts or phases, one of which is an attempt to stimulate the production of goods the output of which was formerly insufficient for domestic consumption. This phase of the policy is typified by the "Battle of the Wheat," as Italy called her campaign to increase wheat production. Within a few years after 1925, she greatly increased her output of wheat, and announced that it was no longer necessary to import significant quantities of this grain.

While Italy carried on a large-scale land reclamation program, wheat

production was increased primarily by raising the yield of land already in cultivation. The government encouraged the use of fertilizers and farm machinery, induced farmers to plant selected seed-wheat, obtained price reductions for chemical fertilizers and fuel for tractors, carried on research, and furnished technical aids. An intensive propaganda campaign was also carried on. However, the chief factor in increasing wheat production was the high price which the government succeeded in maintaining. Very high tariff duties were placed on wheat, wheat derivatives, and wheat substitutes. The duty on wheat itself was as high as 75 lire per quintal (3.7 bushels), or more than \$1.00 per bushel. Regulations required the use of minimum percentages (sometimes as high as 99 per cent) of home-grown wheat in flour-milling.

The victory was costly to the Italian people, since it raised the prices of all wheat products, and in turn decreased the consumption of such products by about 15 per cent between 1925 and 1935. The total cost of wheat to Italian consumers increased by some 32,000,000,000 lire over the same period.¹⁰ The high prices of wheat and related products seem to have unbalanced Italian agriculture. Farmers abandoned the fruits, vegetables, nuts, grapes, and livestock, for which much of the land is suited, and turned to wheat-growing. Decreased imports of wheat were offset by decreased exports of fruits, oils, and wine, and by increased imports of meat; so that some observers feel that there was scarcely any net gain in the matter of international trade, while standards of living definitely suffered. Similar results were obtained in other parts of this phase of the self-sufficiency program.

The Development of Natural Substitutes. A second phase of the self-sufficiency program involves the development of natural substitutes, or the attempt to use articles which are available in rather large amounts in the place of others which are much scarcer. Examples are the use of alcohol mixtures as motor fuel, castor oil as a lubricant, electric power in the place of coal in railway transportation, plastics for steel in manufacturing, glass for metal in containers, aluminum in the place of tin, zinc in the place of brass and bronze, copper in the place of lead, and more concrete and less steel in building construction.

The Development of Artificial Substitutes. The final phase of the self-sufficiency program is the development of artificial substitutes, or the use of synthetic materials in the place of natural products which cannot be produced at home. In this field, textiles made from artificial "wool" (developed from both wood fiber and skimmed milk) partly supplanted wool and cotton materials in the fascist countries. Synthetic rubber and synthetic gasoline were also produced in substantial quantities. Fish skins were made into imitation leather, and potato peelings into "linoleum" and "corks." An "excellent" butter was made from coal tar. It was discovered

¹⁰ E. R. Sikes, *Contemporary Economic Systems*, New York, Henry Holt & Company, Inc., 1940, p. 427.

that 32 pounds of cheap fish would yield one pound of extract which was said to equal 160 eggs in food value. The German authorities claimed that a saving of 400 million dozen eggs a year was possible through the use of these "Viking eggs."¹¹

The Effects of Self-Sufficiency. The economic consequences of the self-sufficiency program in the fascist countries were not wholly satisfactory. Since farmers and other extractive producers were led to carry production beyond the point at which, as private enterprisers, they would normally have stopped producing, they got into the field of higher costs, with the result that prices were high and individual consumption was restricted. In general, the natural substitutes were less satisfactory than the goods which they replaced. If, for example, better buildings could be constructed by using more concrete and less steel, it is reasonable to suppose that builders would have realized this fact, and acted upon it, long before the adoption of the self-sufficiency policy.

There is abundant evidence that many of the artificial substitutes were mere makeshifts, and that they did not come into popular favor. In the first place, these substitutes were usually costly. Synthetic gasoline cost $3\frac{1}{2}$ times as much as imported gasoline would have cost, synthetic rubber about 4 times as much as natural rubber, and the lowest-priced textiles of artificial wool some 30 to 40 per cent more than natural textiles. Second, these substitutes were often of poor quality—clothing made of artificial wool was stiff, heavy, and disposed to retain moisture, and some at least of the synthetic gasoline was too poor in quality for use in aviation, according to some experts. Finally, the manufacture of substitutes gave rise to fresh problems elsewhere in the economy. If textiles are made of milk or wood, the result may be a shortage of these two essential goods. The use of synthetic rubber in manufacturing required different types of machinery from that used in the processing of natural rubber. Funds had to be found for financing the productive facilities required in producing the synthetic substitutes; and these funds were often taken from established industries, with the result that plant and equipment in these older industries were allowed to run down, and their products became higher in price or poorer in quality, or both. A policy of economic self-sufficiency may be necessary in time of war, but on economic grounds it is a poor substitute for dependence on other countries for essential foods and materials.

THE CONTROL OF RAW MATERIALS BY PRODUCING NATIONS

Though our discussion has related specifically to the attempts of industrial nations to control sources of supply, we must not overlook the fact that the areas producing food and raw materials have themselves taken a

¹¹ P. T. Ellsworth, *International Economics*, New York, The Macmillan Company, 1938, p. 506.

hand in playing the game of restrictionism. While raw material controls have sometimes apparently been set up by groups of individuals or companies in the producing areas, it is usually true that the governments of these areas are genuinely, even if indirectly, interested in the proceedings.

The Conditions for Control. The effective control of a raw material by producers is possible only if certain necessary conditions are met. In the first place, the commodity should be one which originates largely in a single country, although control has sometimes been made effective through the cooperation of two or more producing countries. Again, the material should be capable of being stored over considerable periods of time without deterioration, so that it can be withheld from the market indefinitely if necessary. Third, the principal demands for the material should come from prosperous areas where the burden of rises in price which may occur will not be likely to stir up trouble for the controllers. Finally, the material should be such that new sources of supply cannot be developed except over a considerable period of time. Of course, if the commodity is a mineral which occurs almost entirely in a single area, potential competition is not much to be feared. Among vegetable products, however, those most easily controlled are commodities such as coffee and rubber, in which competition can develop only over the period of six or seven years which is required to bring a plantation into profitable operation.

The Purposes of Control. The principal object of the control of most raw materials is revenue for both the government of the producing country and the individual producers of the goods in question. The government usually obtains its revenue through an export tax on the raw material. Such a tax is likely to be particularly heavy when the country has a virtual monopoly of the desired good, for then the burden of the tax will tend to be paid by the users abroad. Occasionally such control will take the form of a governmental monopoly, and in such cases the revenue for the government is derived from the enhanced prices which the control permits.

The revenue for the producers of the raw material comes from the high prices which they can charge when the production or marketing of the material is regulated under the control scheme. The participation of the government in the plan may run all the way from the mere collection and dissemination of information or the development of a plan for cooperation by the producers, to the passage of legislation for the restriction of output or the maintenance of prices. At any rate, the operation of control plans has often resulted in greater profits for the producers, or has at least permitted them to avoid losses which might otherwise have occurred.

Since these controls are almost never used by industrial nations, but are instead the product of regions which are economically undeveloped, a third purpose of control is sometimes present. This is to protect and encourage the domestic industry utilizing the raw material in question. Of course, the most common method of protecting an industry is to impose

an import duty on the finished product. The same result, however, may be reached, especially when the raw material is largely located in one country, by insuring, through a control plan including an export tax, that the users of this material abroad will receive it on less favorable terms than domestic manufacturers. At times there appears to be no intention of building up an industry in the region producing the raw material. In such cases, if the region is a colony, the manufacturing industry in the mother country is often fostered instead by means of a rebate of a portion of the export tax applied to the raw material.

The Control of Raw Materials by Producers. The various raw material controls may be divided into four groups, according to the degree to which the government of the producing country is interested in the plan. In some cases the control is left for the most part to the producers, with the government taking an indirect interest in the proceedings. An example was the Chilean control of nitrates. Some form of nitrogen is essential in the production of fertilizers, dyes, drugs, explosives, and (in recent years) refrigerants and plastics. For many years the only large source of nitrates was the deposits of sodium nitrate in Chile, and the producers were thoroughly organized for the control of this important material.

The period 1884 to 1914 saw six successive agreements go into effect among Chilean nitrate producers. These agreements covered basic production quotas for individual producers, total annual exports, allowable exports for individual firms as a percentage of basic quotas, penalties for exceeding quotas, reductions of quotas for failure to produce, and transfers of quotas between plants of the same firm. The purpose of the agreements was to raise prices by restricting output, but the agreements were to some extent self-defeating since they kept high-cost producers in operation and provided quotas for new producers who entered the industry. Moreover, there was little incentive, under the agreements, for producers to improve their productive methods.

World War I brought high prices for nitrates but also stimulated the production of by-product ammonia and the development of synthetic nitrogen. In 1919 the Chilean Nitrate Producers Association was formed for the purpose of limiting and allocating output and fixing prices. The Association was the selling agent for all producers, and the members had sales quotas which were transferable between firms. In the next ten years many plants were shut down but continued to receive income from the sale of their quota rights to other firms. The policy of the Association was apparently to charge as high prices as the traffic would bear, and prices during the 1920's were the highest ever experienced in peacetime. Earnings on invested capital ranging from 25 to 50 per cent, or even higher, were reported.¹² However, the Association's price policy, together with advances

¹² B. B. Wallace and L. R. Edminster, *International Control of Raw Materials*, Washington, Brookings Institution, 1930, p. 50.

in chemical technology and the desire for self-sufficiency on the part of a number of countries, resulted in great increases in world capacity to produce nitrates, and prices slumped rather sharply after 1929.

During the long period of control, the Chilean government manifested a strong interest in the affairs of the nitrate industry. From 1882 to 1914 the heavy export tax levied on nitrates amounted to 30 to 70 per cent of the selling price of the product at Chilean ports, and brought in over a billion dollars of revenue for the government, or upwards of 40 per cent of the total ordinary governmental revenues. The export tax was continued at a heavy rate in later years. In 1919, and on other occasions, the government approved the statutes of the Association and assisted in bringing producers into the organization. The government was represented by four members of the eighteen that constituted the Association's board of directors, and it aided the industry through reductions in railroad rates and exemptions from import duties on the bags used in shipping nitrates. In general, the Chilean objectives of high prices and large profits, plus substantial revenue for the government, were well realized up to 1929, but the high prices of nitrates placed a severe burden on foreign consumers, many of whom were in the United States.

Nitrate control as a unilateral policy of Chile came to an end in 1929 with the formation of an international cartel which included, among other members, important German and English producers. This cartel continued, with occasional reorganizations, up to the beginning of World War II. The last cartel agreement, signed in 1938, gave Chile 20.377 per cent of total sales. In Chile itself, control of nitrates by producers, with the government standing by as an interested party, ended in 1931 with the formation of a single large corporation, *Compañía de Salitre de Chile* (Cosach), which represented the amalgamation of private and public interests in a state monopoly. The government had four directors out of twelve on the board of Cosach, but the government directors had veto powers in many matters, including prices and sales. After the dissolution of Cosach in 1933, a 1934 law provided a 35-year state monopoly in the foreign sale of Chilean nitrates, through the Chilean Nitrate and Iodine Sales Corporation. This corporation was to determine prices from time to time, and to purchase from producers the amounts necessary for exports. The government was to receive 25 per cent of the profits of the corporation in lieu of revenue from an export tax.

Raw Material Control by Legislative Enactment. The severe depression in the rubber industry following World War I and the failure of attempts to promote voluntary cooperation among the growers, led to the passage of legislation in British Malaya and Ceylon in 1922 which has come to be known as the Stevenson Restriction Act. The purpose of the Act was to bring back prosperity to the rubber growers by raising prices through the restriction of exports and control of production. The opera-

tion of the Act was somewhat complicated. Each plantation was assigned a "standard production" based upon its production for 1920, with allowance for new areas. "Standard production" for most plantations probably ran around 80 to 85 per cent of capacity. Exportation at the minimum rate of export duty was permitted to each plantation up to a certain percentage of standard production. For greater amounts, the export duty became so heavy as to prohibit exports, for all practical purposes. The percentage of standard production which could be exported at the minimum rate of export duty varied as the price of rubber in London oscillated about a "fair price" per pound.

The Stevenson Act had the effect of restricting the output of rubber, at least temporarily, and also encouraged speculation in rubber. It was successful in stabilizing conditions in the industry and in bringing prosperity by raising prices, but just how much credit for the rise in prices should go to the Act and how much to other factors is not apparent. At any rate, the spot price of rubber in New York rose from a low of 13.9 cents a pound in August, 1922, to the high mark of \$1.048 a pound in November, 1925, and then fell to 18 cents in December, 1928.¹³ During this period, immense profits were made by the rubber producers. Dividends for British rubber companies, which had ranged between 6 and 12.5 per cent in 1923 and 1924, varied between 17.5 and 55 per cent in 1925 and 1926. One estimate has it that this raw material control cost the United States about \$540,000,000 from 1924 through 1926.¹⁴ Part of this extra cost was borne by the manufacturers of rubber articles in this country and part was passed on to consumers.

The decline in the price of rubber after 1925 was the result of several forces. The anxiety of American industrial consumers over future supplies of this raw material was to some extent alleviated; world production of rubber was steadily increasing, especially in non-British areas where the control did not apply; and the demand for crude rubber was lessened by means of the greatly increased use of reclaimed rubber. The Stevenson Act aroused a chorus of protest, with the United States as chief protestant. The Act was finally repealed in 1928, when it became evident that it had outlived its usefulness.

The price of crude rubber slumped badly in the post-1929 depression years, and reached a low of 3.43 cents a pound in 1932. Control over rubber production was soon reimposed, but this time on an international basis. In 1934, the United Kingdom, India, Holland, France, and Siam reached an accord known as the International Rubber Regulation Agreement. With two extensions, this agreement continued in operation until April 30, 1944. Basic quotas were set up for nine producing regions. The International Rubber Regulation Commission periodically fixed uniform

¹³ *Ibid.*, pp. 188, 189.

¹⁴ *Ibid.*, pp. 212, 213.

percentages of basic quotas which the regions could export without penalty, and the participants agreed to limit exports to these amounts. New plantings of rubber trees were strictly prohibited. The International Rubber Regulation Agreement provided a much better system for market stabilization than had the Stevenson Plan. During the period of its operation, rubber prices fluctuated to some extent but were generally profitable for producers, and the furore created by the earlier control scheme did not reappear.

Control Through Government Aid to Producers. Probably the best example of this type of control was the Brazilian control of coffee. This plan was provided for by legislative enactment, but it differed from the control of rubber in that direct financial aid was given by the government to the coffee growers. After three successful "valorizations" of coffee, during which coffee was bought up and withheld from the market and restrictions were placed upon its export and the planting of new trees, a plan for the "permanent defense" of coffee was adopted. The law providing for such defense was passed in 1922, but the national government withdrew in 1924 and the measures for the protection of coffee were put into operation by the State of São Paulo (which produces 70 per cent of Brazil's output of coffee) in 1925. Control was placed in the hands of the Institute for the Permanent Defense of Coffee, which was composed of five members.

The main purpose of the permanent defense was the stabilization of prices through the regulation of the amount of coffee coming on the market. The State of São Paulo owned an extensive system of warehouses, in which some 8 million to 12 million bags of coffee could be stored until market conditions permitted their sale. Planters were required by law to turn over all their coffee to the warehouses of the Institute, and at times were able to get as much as 75 per cent of its market value as a loan from the government. Funds for loans to the planters and for general expenses were obtained both by borrowing and by taxation.

By these methods it was possible for the Institute to maintain a high level of prices for some time. Until 1927 no great accumulation of coffee in the warehouses took place because world consumption was keeping pace with production. Beginning with the bumper crop of 1927-28, however, production far outstripped consumption, and prices could be maintained at anything like a satisfactory level only by amassing a tremendous surplus of coffee in the warehouses of the Institute. It was expected that by the middle of 1930 this reserve would be only just short of the amount annually consumed in the world. The strain proved too much for the credit of the Institute, and the price of coffee collapsed late in 1929. All Brazilian banks were in dire straits because of frozen assets, and the situation was saved only by obtaining an immense loan from abroad.

Following this emergency, control of the coffee situation was again taken over by the Brazilian government. In 1931, an export tax payable by the

exporter was imposed on coffee, and the proceeds were used to buy up and destroy considerable quantities of low-grade coffee. This program was continued on a larger scale in 1932. In 1933, the coffee crop was unusually large and the government decreed that planters must turn over 40 per cent of the crop for destruction, at a price covering approximately the direct (variable) costs of production.¹⁵ In 1937, the government abandoned its attempt to control the price of exported coffee, and, though the price fell, sales increased by more than enough to offset price decline. In 1938 and 1939, the planters gave up 30 per cent of the crop for destruction, and 25 per cent was destroyed in 1940. Coffee sold to the government for destruction was paid for at the very low rate of 2 milreis (10 cents) per bag. The State of São Paulo also bought coffee for destruction in 1940, and it was hoped that the quantity of new coffee placed on the market would be reduced from 20,000,000 to 11,500,000 bags, as a result of the two programs.¹⁶

Late in 1940 the control of coffee, like that of rubber and nitrates, became international, upon the formation of the Inter-American Coffee Agreement between the United States and fourteen Latin American countries. The plan was administered by an Inter-American Coffee Board of 36 members, 12 of whom represented the United States. Quotas were developed for the fourteen Latin American countries after considerable negotiation, and each country undertook to do its own enforcing. The United States agreed to limit its imports accordingly. The agreement had no provision concerning the prices of coffee, but generally higher prices prevailed until the outbreak of World War II. The United States was protected from exploitation, however, since it controlled one-third of the Board members and because the agreement provided that the quotas to be imported by this country could be increased by vote of one-third of the Board members.

Control by Governmental Monopoly. It is only a step from control through a governmental plan, with public funds and facilities, to control by governmental monopoly. An example of the latter type of control is the pre-war Japanese camphor monopoly. Camphor is used chiefly for the making of celluloid, and the moving picture industry is consequently dependent upon it. Camphor is also an important element in the manufacture of pyroxylin products, including non-breakable or shatterproof glass.

The monopoly control of camphor has been carried on with a dual purpose. It was desired, of course, to bring in revenue for the government, and it was hoped that the domestic manufacture of refined camphor and camphor products would be encouraged. The Japanese government has

¹⁵ J. W. F. Rowe, *Markets and Men*, New York, The Macmillan Company, 1936, pp. 43-46.

¹⁶ *Commercial and Financial Chronicle*, May 18, 1940, p. 3225.

had complete control of the industry. No one could go into the forests to collect raw camphor by distillation of the wood of the camphor laurel tree except operators licensed by the government. Thus both the quantity to be produced and that to be sold at home and abroad have been arbitrarily determined. In addition, the government set both the price for the sale of camphor and the price to be paid to the operators who collected it.

The monopoly was quite successful, for a time, in maintaining high and profitable prices. The price of camphor doubled within two years after the establishment of the monopoly, and prices were well maintained in the face of constantly growing production and sales. The power of the monopoly to set a high price was greatly weakened in recent years by the competition of synthetic camphor. This product can be widely substituted for the natural camphor, and is even preferred for some purposes. Its production on a commercial scale at reasonable cost resulted in a modification of the price policy of the Japanese monopoly, which may be further modified by conditions imposed on Japan by her conquerors.

The Results of Raw Material Controls. Our discussion has indicated that schemes for the control of raw materials and foods have met with varied success, though in some cases and in some periods of time they have been able to control production, raise prices, and furnish large profits for producers. In most cases the controls have been strongly resented by countries which, having need for these raw materials and foods, suffered under the burdens imposed by the controls and visualized a time when they might be cut off completely from their supplies of essential commodities. Like the measures used by imperialistic nations, raw material controls have been a potent source of international friction and ill will.

We have noted a tendency for raw material controls, even when instituted by a single country, eventually to become international in scope. In addition to the cases we have mentioned, international combinations or cartels, in their several fields, have been able to control the following percentages of the world output of certain materials: copper, 95 per cent; bismuth, 90 per cent; zinc, 97 per cent; copra, 80 per cent; and whale oil, 80 per cent.¹⁷ These, indeed, are only a few examples from a long list of international cartels, which includes steel, aluminum, potash, cement, dyes, mercury, tin, and rayon combinations. Several advantages are claimed for international combinations. They are said to reduce the number of middlemen and the cost of their services; to eliminate cross-handling, the unnecessary payment of import duties, and dumping; and to cut down advertising and selling expenses. However, the usual results of successful international combinations are restricted production, high prices, and large profits.

¹⁷ *Encyclopædia of the Social Sciences*, vol. xiii, p. 131.

ECONOMIC INTERDEPENDENCE IN THE FUTURE

The National Approach. We have yet to consider what can be done about the problems resulting from the economic interdependence of nations. In general, little success seems likely to attend the efforts of any one nation to deal individually with these problems. The United States, for example, can do little when confronted by an international cartel which controls a material that we are unable to produce, or by a preferential tariff designed to exclude us from colonial markets—for the activities to which we take exception are carried on outside the jurisdiction of this country.

Action has sometimes been taken in the United States to try to improve the raw material situation, but little has been accomplished. Congressional investigations have been conducted and occasionally funds have been appropriated to promote the production in this country of materials which have been subjected to control by foreign countries. When public denunciation of some type of control has been particularly vigorous, the Department of Justice has brought suit against the American agents of foreign monopolies in the attempt to restrain their activities, but the suits have seldom been successful. The government has also been instrumental in preventing in this country the flotation of loans for the benefit of foreign materials and food controls, but these loans have never failed of flotation in some other country or countries.

The principal nationalistic alternative to such feeble attempts at relief is retaliation, with control matched against control and restriction against restriction. As we have seen, however, retaliation is a dangerous policy. It almost never helps solve the original problems but, on the contrary, complicates them. There is no nation so strong that it can bring economic pressure to bear upon other nations without fear for itself, or so rich in economic resources that it can be highly prosperous without placing a considerable amount of economic dependence upon other nations. If each nation carried the control of foods, raw materials, and markets to the n th degree, the result would be the destruction of international exchanges, and economic disaster for all.

The International Approach. There can be little doubt, then, that the approach to the problems of economic interdependence should be international in character. Although relatively little has been accomplished in the past by way of bringing about international cooperation in these matters, the prospect for the future is considerably more promising. The various international organizations which we have described in the two preceding chapters, such as the International Monetary Fund, the International Bank for Reconstruction and Development, and the Economic and Social Council of the United Nations, have among their objectives (1) the elimination or reduction of protective tariffs and export duties,

export and import quotas and licensing, foreign exchange controls, currency depreciation, multiple currency devices, barter trading arrangements, and other restrictions on and obstacles to trade; (2) the stabilization of national monetary systems and foreign exchange relationships; and (3) the promotion and facilitation of international loans and investments as needed for development and reconstruction.

If these organizations operate according to plan, the result should be a genuinely international solution for the problems of economic interdependence. The nations of the world will then have access on equal terms to the foods, minerals, raw materials, and other essential products they require, and to the markets of the world on the basis of competitive efficiency in selling their products. Moreover, they will find it cheaper to buy the economic goods they need, and to compete freely for markets, than to try to conquer or otherwise secure exclusive control over areas which will serve as markets and sources of essential goods, or to follow a policy of economic self-sufficiency at home. The international cooperation which is in prospect will not directly solve the problem of population pressure, but it will help the several nations to take care of their populations as well as possible through the most effective use of their resources and those of other countries. It is too much to expect that these international organizations will operate perfectly, but they will find it difficult to produce conditions worse than those which have existed in the past in their absence.

1. What has been the relation between population growth and industrialization?
2. How have industrialization and the development of large-scale production led to economic interdependence among nations?
3. "The United States is economically self-sufficient and need not depend on other countries for her economic welfare." Do you agree?
4. Why have colonies been sought by the great industrial nations?
5. What two tariff policies have nations commonly adopted in connection with their colonies? Distinguish carefully between them.
6. What is the difference between a colony and a protectorate? Between a protectorate and a mandate? Explain.
7. What are concessions? Of what importance are they in our modern economic world?
8. "Imperialistic adventures of nations were confined to the last century and have not been known in recent years." Do you agree? Explain.
9. Have colonies generally been helpful to industrial nations in affording relief from population pressure? Explain.
10. How important have colonies been to industrial nations as sources of foods and raw materials? Explain.
11. "Colonies have usually solved the mother countries' problem of finding markets for manufactured products." Discuss.

12. How have imperialistic policies affected the relations between industrial nations?
13. Is a policy of national economic self-sufficiency an alternative to imperialism or a tool of imperialism and war? Explain.
14. "A policy of economic self-sufficiency is likely to have three distinct parts or phases." Explain.
15. What are the economic results of the policy of economic self-sufficiency? Explain.
16. "A policy of economic self-sufficiency is indefensible on economic grounds." Explain.
17. Why have controls over raw materials been instituted by many countries producing raw materials? Explain.
18. Under what conditions are these controls most likely to succeed?
19. What has been the basis, in this chapter, for classifying controls exercised by producing countries over raw materials?
20. Give an example of each type of raw material control.
21. What have been the results of controls over raw materials by producing countries?
22. Why has the national approach to the problems of the economic interdependence of nations been both ineffective and dangerous?
23. "The prospects of a genuinely international approach to the problems of economic interdependence are now brighter than ever before." Explain.
24. What results may be expected from the functioning of the various international organizations which have recently been set up? Explain.

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PART SEVEN

Government and Economic Life



Public Expenditures and Public Borrowing

"GOVERNMENT," IT HAS BEEN SAID, "AS A FORM OF SOCIAL ORGANIZATION, has developed because, in the long run, it has afforded the means of supplying men with certain services more efficiently and more economically than these could have been supplied by each for himself."¹ All economic systems of the present day are marked, to a greater or smaller extent, by division of labor. Each individual performs a single function, or a limited number of functions, and trusts to others to furnish him with the wide variety of commodities and services which he does not produce for himself. In the case of some services it seems the part of wisdom to look to the government for a more satisfactory performance than could be expected from private individuals or companies. The delegation of the provision of such services to and their performance by the government may be viewed simply as a part of division of labor.

The Nature of Governmental Functions. These functions which are performed collectively rather than by individuals are of several kinds. Some services, such as furnishing protection or maintaining law and order, would be very difficult, if not impossible, for the citizen to perform for himself. Others that could be and sometimes are carried out by private companies are often turned over to the government in the hope that they will thus be performed more efficiently or cheaply. Examples are the provision of water and electricity by municipalities. Still other functions must be performed by the government, if they are to be done at all, because an individual's share in the resulting benefits is so small or so long deferred that he would not be moved by self-interest to undertake them himself. The establishment of institutions for dependents and defectives may be cited as an example. Even when an activity is left in the hands of private individuals, the government is often called upon to exercise a restrictive and regulatory influence. Thus we have a Pure Food and Drugs Act, a Sherman Anti-Trust Act, a Securities Act, and other legislation designed to protect the interests of the public. The exact nature of the individual

¹H. L. Lutz, *Public Finance*, New York, D. Appleton & Company, Inc., 1936, p. 1.

governmental functions will become apparent as we discuss the expenditures of federal, state, and local governments.

Governmental Functions and Expenditures. The functions of these governmental units, though they differ in many particulars, are alike in one respect—they all involve the expenditure of funds. There has been a marked tendency for public expenditures to increase during the past few decades, not only in the United States but in other countries, and for both the national and other governmental units. The increasing activities and expenditures of governments involve problems of vital importance to everyone. One problem is to decide to what extent we may best satisfy our desires by the collective utilization of our resources, natural and human, rather than by leaving to private individuals the task of providing certain needed commodities and services. That is, we must consider how large a part of our real income we wish to receive collectively rather than individually. The discussion of this problem ordinarily assumes that the great bulk of economic activities will be left in private hands and that the economic system as a whole will continue to operate in capitalistic fashion.

A second and very important problem is to decide whether the government may properly use its fiscal policy to control the operation of the economic system as a whole. Should the functions of government include the assumption of responsibility for the successful operation of the economic system? Should the government, through its expenditures and other elements of fiscal policy, attempt to maintain the aggregate demand for goods in the economy so that a high and stable level of production, income, and employment will be attained? Are such governmental functions and expenditures compatible with the continued operation of a capitalistic type of economic system? Questions of this kind are very definitely at issue at the present time.

INCREASES IN PUBLIC EXPENDITURES

Expenditures of the Federal Government. In investigating the problems of public expenditures, let us consider first the increase in public expenditures in the United States and the nature of these expenditures in recent years. The expenses of our federal government increased from \$517,000,000 in 1903 to \$725,000,000 in 1913, to \$3,437,000,000 in 1928, and to \$12,711,000,000 in 1941.² The increase from 1903 to 1941 was 2358 per cent. However, even the large expenditures of 1941 were smaller than those of some years during World War I, and very small indeed by comparison with those which were yet to come. During World War II, federal expenditures skyrocketed to a peak of \$100,405,000,000 in 1945, or

² *Report of the Secretary of the Treasury*, 1928, p. 418; Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics*, p. 513.

about eight times the 1941 expenditures, before declining to \$65,019,000,000 in 1946.³

Expenditures for protection (national defense) are always a very important item in the federal budget. In 1945, as we see in Table 48, direct expenditures for national defense amounted to \$90,029,000,000, or 89.7 per cent of the total federal expenditures. If expenditures for interest on the public debt and for veterans' pensions and benefits are included, the total cost of national defense amounted to 95.3 per cent of all federal expenditures. In 1946, expenditures for national defense were 74.7 per cent of the total expenditures, or 88.5 per cent if the expenditures for interest on the public debt and for veterans' pensions and benefits are

TABLE 48. EXPENDITURES OF THE FEDERAL GOVERNMENT, FISCAL YEARS 1945 AND 1946

(Source: *Federal Reserve Bulletin*, September, 1946, p. 1049, and *The Economic Almanac for 1946-47*, New York, National Industrial Conference Board, Inc. 1946, p. 293.)

Type of Expenditure	Amount Spent in 1945 (in millions)	Per Cent of Total Expen- ditures, 1945	Amount Spent in 1946 (in millions)	Per Cent of Total Expen- ditures, 1946
National defense	\$ 90,029	89.7	\$48,542	74.7
Interest on the public debt	3,617	3.6	4,722	7.3
Veterans' pensions and benefits	2,060	2.1	4,253	6.5
Aids to agriculture	834	0.8	1,110	1.7
Relief and work relief	567	0.6	670	1.0
Public works	319	0.3	389	0.6
Transfers to trust accounts (social security, etc.)	1,646	1.6	1,918	3.0
General government	1,008	1.0	1,453	2.2
Other expenditures	325	0.3	1,962	3.0
Total expenditures	\$100,405	100.0	\$65,019	100.0

included. The total cost of national defense clearly includes expenditures for the benefit of veterans, and would include all payments of interest on the public debt of the federal government if this debt were large solely because the federal government, in certain past years, had spent for national defense at a more rapid rate than could be covered by the ordinary governmental revenues of those years. As a matter of fact, however, a minor part of the public debt resulted from governmental borrowing to finance heavy expenditures during the post-1929 depression.

Expenditures for such purposes as public works, relief and work relief for the unemployed, social security, and aids to agriculture, which amounted to 27.9 per cent of the total as recently as 1941, were relatively

³ *Federal Reserve Bulletin*, September, 1946, p. 1049. All the figures for federal expenditures are for fiscal years running from July 1 to June 30. Thus, the 1945 fiscal year included the period from July 1, 1944, to June 30, 1945.

unimportant in 1945 and 1946. The cost of maintaining and operating the ordinary departments of government was only 1.0 per cent of the total federal expenditures in 1945 and 2.2 per cent in 1946. Total federal expenditures were about \$727 per capita in 1945 and \$466 in 1946, as compared with \$92 in 1941. (Preliminary estimates for the fiscal year 1947 indicated that federal expenditures would total about 42½ billion dollars, including 17 billions for national defense and 5 billions for interest on the public debt.)

Expenditures of State Governments. The state governments of the United States spent a total of \$207,000,000 in 1903, \$359,000,000 in 1913, \$1,753,000,000 in 1928, and \$3,588,000,000 in 1944.⁴ The increase from 1903 to 1944 was 1633 per cent. As we see in Table 49, the largest state

TABLE 49. EXPENDITURES OF STATE GOVERNMENTS IN 1944

(Source: *The Economic Almanac for 1946-47*, New York, National Industrial Conference Board, p. 311.)

Type of Expenditure	Amount Spent (in millions)	Per Cent of Total Expenditures
General government	\$ 172.0	4.8
Public safety	145.1	4.0
Highways	711.2	19.8
Natural resources	94.6	2.6
Health	20.4	0.6
Hospitals	282.5	7.9
Public welfare	516.4	14.4
Correction	80.7	2.3
Education	1073.6	29.9
Interest	92.6	2.6
Miscellaneous	399.2	11.1
Total expenditures	\$3588.3	100.0

expenditures in 1944 were for such items as education (29.9 per cent), highways (19.8 per cent), and public welfare (14.4 per cent). Less important items of expenditure included general government, public safety, natural resources, health, hospitals, correction, and interest on state debt. State expenditures in 1944 amounted to over \$26 per capita.

Expenditures of Local Governments. Local governments in the United States spent a total of \$912,000,000 in 1903, \$1,783,000,000 in 1913, \$6,067,000,000 in 1928, and \$4,604,000,000 in 1944.⁵ The increase from 1903 to 1928 was 554 per cent, whereas that from 1903 to 1944 was only 405 per cent. Data covering the detailed items of expenditure by all local

⁴ National Industrial Conference Board, *The Economic Almanac for 1946-47*, New York, 1946, p. 286. The data include only expenditures from state funds, and not grants from the federal government to the states.

⁵ *Ibid.*, p. 286.

governments are not available, but we can get an idea of the nature of these expenditures by examining those of cities with 25,000 population or over in 1944, as shown in Table 50. Here we see that the largest expenditures were for education and public safety, which amounted to 21.4 and 21.0 per cent of the total, respectively. Less important items of

TABLE 50. EXPENDITURES OF CITIES WITH POPULATION OVER 25,000 IN 1944

(Source: *The Economic Almanac for 1946-47*, New York, National Industrial Conference Board, 1946, p. 311.)

Type of Expenditure	Amount Spent (in millions)	Per Cent of Total Expenditures
General government	\$ 165.2	7.2
Public safety	481.5	21.0
Highways	170.9	7.4
Sanitation	165.8	7.2
Health and hospitals	157.9	6.9
Public welfare	185.7	8.1
Correction	19.1	0.8
Education	490.8	21.4
Recreation	80.7	3.5
Contributions to trust funds and public service enterprises	164.7	7.2
Interest	147.0	6.4
Miscellaneous	68.1	2.9
Total expenditures	\$2297.4	100.0

expenditure included general government, highways, sanitation, health and hospitals, public welfare, correction, recreation, interest, and contributions to trust funds and public service enterprises. Total expenditures of federal, state, and local governments in 1944 amounted to about \$730 per capita, and were almost two-thirds as great as the total national income.

CAUSES OF INCREASES IN PUBLIC EXPENDITURES

Increase in Population. Among the more obvious causes of larger public expenditures in this country is the steady increase in the number of persons for whom governmental services must be performed. This growth in population, even if it called for nothing more than a duplication of existing governmental machinery, would bring about at least a proportional expansion in expenditures, unless it were found possible to render governmental services on the basis of mass production, with a decreasing cost per individual served. Unfortunately for our hopes in this direction, the performance of functions by the various governmental organizations seems to be subject to a law of increasing rather than decreasing costs; that is,

an increase in the number of individuals cared for often involves a greater than proportional increase in the cost of rendering the services in question.

Not only does the performance of a given number of functions for an increasing number of persons bring with it an increase in the costs of government, both absolutely and per capita, but in addition it often happens that a growth in population causes an expansion of the needs which it appears necessary or wise to satisfy collectively rather than individually. A growth in the population of a city, for example, usually brings about an expansion in the number of functions to be performed by (say) the police department, and does not mean simply that the same functions will be performed as before, though for a larger number of persons. This explains why the financial statistics of cities show a fairly steady per capita increase in public expenditures, as we pass from the smallest cities to the largest.

Changes in General Prices. Changes in the general price level and the purchasing power of money constitute another cause of the growth of public expenditures. The general price level in the United States was slightly higher in 1913 than in 1903, and was much higher in 1928 than in either of these two other years. The price level in 1941 was lower than in 1928, but in 1945 and 1946 it was considerably higher than in 1928. The national, state, and local governments, in order to render the services expected of them, must be able to obtain materials and supplies, and in general to gain access to the factors of production much as does any business man. The governments, in other words, must enter into competition with private individuals and corporations for the use of the necessary agents of production. Hence, when the prices of goods and productive factors rise, governmental expenditures must increase also, even though there is no change in the number of functions performed, or in the intensity with which they are carried on. Part of the increase in public expenditures since the turn of the century has been nominal rather than real, representing, it is true, the handling of more dollars, but not the expenditure of greater purchasing power. However, after all allowances are made for changes in the purchasing power of money, there still remains a very large growth in public expenditures to account for.

Inefficiency in the Appropriation of Public Funds. A factor which ranks high in the popular mind as a cause of increasing public expenditures is carelessness and extravagance in making appropriations for various purposes, combined with a lack of business methods, if not downright corruption, in the administration of public funds. Actually these evils can scarcely be an important cause of increasing public expenditures unless they themselves tend to increase in severity with the passage of time, but they may be an ever-present reason why public expenditures are greater than they need to be in view of the functions performed by governments.

The appropriation of funds with which to carry on the functions of the various governmental units in the United States is in the hands of elected representatives, that is, members of national and state legislatures and of city councils. Under our political system it often happens that the qualities which make it possible for a man to be elected to such an office are not those which will make him an expert in administering the duties devolving upon him. Public expenditures are determined, as a result, largely by men who lack training in economic principles and an understanding of economic problems. As a consequence, appropriations are often made in a haphazard and piecemeal fashion, some being entirely too small and more being disproportionately large, with each individual appropriation quite unrelated to any sum which might be regarded as an appropriate total.

Some improvement in this situation has taken place in recent years, since many of the governmental units, including the federal government itself, have adopted budget systems. A budget does afford some check upon appropriations, and it fixes to a certain extent the responsibility for them. However, it seems evident with each passing Congress that the evils mentioned above have not been completely eradicated. Indeed, it is likely that they cannot be eliminated until some change takes place in the attitude of large numbers of citizens toward the appropriation and expenditure of public funds.

The Popular Attitude Toward "Public Money." The democratic form of government assumes that most voters will be intelligent and socially minded; that is, that they will know how best to serve their own interests and those of others, and that they will be sufficiently unselfish to take into consideration the broad social interests rather than their own personal gain. One is tempted to doubt that this assumption is well founded, especially when one observes the attitude of some persons toward the funds of the federal government. Many people seem to regard the federal treasury as a vast reservoir into which flow mysterious but inexhaustible streams of wealth. It appears to such people that the problem in connection with the treasury is not one of economy in appropriations and expenditure, but rather that of seeing to it that their particular district or locality receives its full share of the funds—or more than its share, if possible. Representatives in the national legislature are conceived of by their constituents as agents of their district, whose duty it is to insist that an appropriate portion of governmental funds shall be diverted in its particular direction. Representatives are instructed to "bring home the money or don't come back."

The only way a representative is likely to be able to get through, for his district, an item in the appropriations bill is by enlisting the support of other members by promising to vote for the favorite projects of these members, or, in other words, by engaging in what is commonly called

"logrolling" or "back-scratching." Examples of this practice are to be found in the river and harbor bills, the public buildings bills, the army and navy bills, and in most of our recent tariff bills. Scrambles for federal funds were apparent in connection with the public works and relief programs of the Roosevelt administration during the great depression of the 1930's, and again in the large expenditures during World War II. It may be noted, also, that those who complain loudly about federal extravagance and waste often grab vigorously at whatever federal funds are to be had. The probability of obtaining scientific and economical appropriations and expenditures in the face of such processes and attitudes is small.

Wastes in the Administration of Public Funds. In the administration of governmental funds, as well as in the appropriation of such funds, undesirable practices may be noted. It is difficult to obtain proper administration of offices and funds, even given the best of efforts and intentions, when the holding of such offices is dependent upon the vagaries of political fortune. It is true that under our Civil Service Laws we have some slight modification of the old-fashioned "spoils system," under which appointments to government positions were generally regarded as a legitimate part of the fruits of victory at the polls; but there is still a high rate of "turnover" in offices which must be characterized by security of tenure if efficiency is to prevail. Certainly, the folly of electing by popular vote officials who are to hold positions requiring technical knowledge and training should be apparent to everyone.

Though there are many public officials in the employ of the various governmental units who serve faithfully and well for modest salaries, it must be admitted that there are others who expend public funds in a wasteful and extravagant manner. This waste may take a variety of forms. In some cases the payrolls are padded—that is, more persons are employed than are needed to carry on the functions of government, and members of an administrator's family are often placed in appointive positions. Sometimes the quantities of supplies and equipment purchased are unnecessarily large, or the prices paid are unreasonably high in view of the quality obtained. Again, contracts may be awarded to those who have not submitted the most favorable bid for the work in question. We do not mean, of course, that only in governmental hands are funds wastefully expended, for much waste occurs also in private business expenditures.

The Expansion of Governmental Functions. But after due allowance has been made for growth of population, changes in the price level, and possibly other factors, the chief explanation of increasing public expenditures is to be found in the continually growing number of functions being performed by federal, state, and local governments. This expansion of functions in turn has been largely the result of such things as the great and pressing economic problems that have arisen as our economic system

has increased in size and complexity, the growing conviction that social welfare can and should be advanced by collective action through government, and the more recent notion that the government can and should assume direct responsibility for the satisfactory operation of the economic system as a whole and for the maintenance of a high level of income, production, and employment.

Economic Problems and Public Expenditures. With the development of our economic system, production has become highly specialized, round-about, and large scale. The economy has become increasingly dependent upon a smoothly functioning system of exchange, and economic interdependence has increased. As the economic system grew larger and more complex, problems developed which often caused distress to large numbers of people and seemed to call for collective action. Examples are problems of money and banking, public utilities, transportation, monopolies and trusts, labor relations, and the issuance of securities. In many cases the attempted solutions have involved governmental regulation which has not required large public expenditures though it has added greatly to the list of governmental functions. The people in the economy continued in general to hold to the capitalistic principle that governmental interference with and control over the economic activities of private citizens is in itself not a good but an evil. However, they were willing to embrace this evil in cases in which it appeared to be the means of avoiding or eliminating a greater evil. Governmental regulation in connection with such individual economic problems did not keep the economy as a whole from operating on a capitalistic basis.

Welfare Activities and Public Expenditures. State and local governments now spend large sums for highways, education, and public welfare in general. Such expenditures are thought to make for the development of our people and their economic activities, and hence for the general welfare. When the automobile was first introduced, highway construction and maintenance could be provided at a cost which would now seem remarkably low. However, the use of the automobile for pleasure has increased so rapidly that a car is at present regarded by most families as a necessity, and its use for commercial purposes has grown almost as rapidly. Traffic on the main highways has become extremely heavy, and the expense of constructing and maintaining macadam and concrete surfaces which will support giant motor trucks is very high.

As an economic system increases in complexity, it becomes more and more apparent that adequate preparation for one's life work is essential to the achievement of a high measure of success, and it becomes extremely difficult for a person to rise from the ranks if he depends upon his native ability unaided by occupational training. Also, as standards of living improve, greater educational facilities are demanded and obtained. For these and other reasons, we are at present attempting by collective action

to provide everyone with a certain minimum amount of training, and to assist as many as possible to pursue higher education. Since little or no effort is made to place most of our educational activities on a self-supporting basis, the cost in the form of public expenditures is large.

There have been other large increases for hospitals, clinics, health and sanitation, recreation, and institutions for delinquents, dependents, and defectives. In the dreary days when the insane were left to "mumble in the chimney corner," when the feeble-minded were allowed to roam at will and were merely regarded as a bit queer, when sickness or even plagues were thought to be marks of divine disfavor or of evil spirits rather than results of lack of sanitation, and each family was expected to pay for its own medical attention or to go without, governmental expenditures for such purposes were not large. But nowadays we regard the satisfactory handling of these matters as vital to the public welfare, and undertake to provide for it through governmental agencies. Provision of this kind is praiseworthy, but it is also expensive.

Governmental Functions and Expenditures in the Great Depression. The idea that the federal government should assume direct responsibility for the satisfactory operation of the whole economy came to the fore in the depression years following 1929. The United States had many business depressions prior to 1929, but the earlier depressions had been allowed to run their course, apparently on the principle that recovery attained in the "natural" manner would be prompt and lasting. But in the post-1929 depression there was a widespread demand that the government take action both to promote recovery from the depression and to relieve the millions of unemployed and destitute. The response of government to this demand resulted in greatly expanded functions and enormous public expenditures.

One important depression activity was caring for the unemployed, numbering over 12 million persons at the worst of the depression. Most of these people, if unassisted, would have been not only unemployed but completely destitute, lacking even those minimum resources necessary to keep body and soul together. With state and local governments apparently unable to handle the problem, the federal government lent a helping hand. Its activities in behalf of the unemployed, through the Public Works Administration, the Civil Works Administration, the Civilian Conservation Corps, the Works Projects Administration, and assistance given the states in providing direct relief, were very costly. From 1933 to 1941, inclusive, the total expenditures for unemployment relief were about \$18,000,000,000, or \$26,000,000,000 if public works are included as a part of unemployment relief.

American agriculture was in a very critical condition following World War I, and suffered still further losses during the depression. The agricultural problem and its treatment by the government will be examined in Chapter 45, but we may note here that the condition of agriculture

during the depression was so serious as to constitute a severe drag on general recovery, in addition to being a difficult problem in itself. The federal government, through the Agricultural Adjustment Administration, the Farm Credit Administration, the Commodity Credit Corporation, and other agencies, attempted to regulate agricultural production, raise the prices of farm products, refinance farm mortgages, and lend the farmers credit on their holdings of various crops. The expenditures for these purposes were more than a billion dollars in certain years, and totaled over \$5,000,000,000 for the period from 1933 to 1941, inclusive.

Other federal activities designed to promote recovery were less costly than those already mentioned. They included financial assistance to railroads, banks, and other institutions through the Reconstruction Finance Corporation; the refinancing of the obligations of home owners other than farmers; the promotion of the rehabilitation of industry and business through self-regulation under the National Recovery Administration; insurance for bank depositors through the Federal Deposit Insurance Corporation; the Subsistence Homesteads Projects; and the Emergency Housing Program. At the same time the federal government undertook other activities which seemed to be dedicated to reform rather than or in addition to recovery from the depression. Examples included the regulation of the issuance of new securities and of the activities of security exchanges through the Securities and Exchange Commission under laws of 1933 and 1934, the regulation of the public utility industry through the Securities and Exchange Commission and the Federal Power Commission under the Public Utilities Act of 1935, and various activities for the benefit of labor carried on under the National Labor Relations Act of 1935 and other laws.⁶

The War Period. Most of the depression activities of the federal government were still going full blast when World War II began. When the United States entered the war, governmental control over the economic activities of the country increased greatly and soon dwarfed anything that this country had ever before experienced. Long before the war was over, agencies of the federal government were controlling output in many branches of production; the prices of commodities and services; wages and salaries; rents; the allocation of essential materials and equipment among industries and businesses; the allocation of labor among industries, businesses, and the armed forces; industrial relations in many industries; imports and exports; the apportionment of certain scarce consumers' goods among the individual people; and many other things. While many persons questioned whether all of these governmental con-

⁶ In practice, the distinction between recovery and reform activities was not at all clear cut. Many activities dedicated to recovery also included certain reform features, and it was doubtless hoped that some of the reform activities would also be of some assistance in promoting recovery from the depression.

trols were essential to the successful prosecution of the war and whether certain controls were well suited to the objectives which were being pursued, the wartime functions and expenditures of the federal government were in general accepted with good grace by the people as being more or less inevitable in such an emergency period.

Proposed Governmental Functions. During the war period many people in this country apparently came to the conclusion that, while some controls over economic activity imposed by the federal government in wartime should be relaxed in the post-war period, the federal government must continue to assume responsibility for the successful operation of the economy as a whole. Governmental functions proposed in this connection included the guaranty or underwriting of full employment by the government; the provision of a system of social security, popularly known as the "cradle-to-grave" variety, to cover many more people, provide against more risks, and furnish much larger benefits than the present system; the provision of high minimum wages or even a national minimum per capita income; and support for a high wage policy in general in order to maintain purchasing power and the total demand for goods. Such functions, as we shall see later, might have serious implications for the future of our economic system.

PROPER ACTIVITIES OF GOVERNMENT

Our discussion has shown us that, except for allowances that must be made for such factors as changes in general prices, and extravagance and graft, the size of public expenditures depends upon the number and cost of the services which the various governmental units are called upon to render. Hence, in connection with the study of public expenditures, it is important to inquire how many functions should be assigned to the government. Since many of the functions now performed collectively could be carried on at least moderately well by other means, the answer which one person would give to this question might differ widely from that of another. There are some few individuals even today who believe that the ideal condition of society demands a complete absence of government. Others believe that government is a necessity but that its duties should be kept to a minimum, while still others would have all industries owned and controlled by the government—that is, by the people collectively rather than individually. Everyone would then work for the government; and it might be found wise, according to this opinion, to extend collectivism so far as to include the collective use of the products of economic processes.

A Test for Governmental Functions and Expenditures. There is clearly no necessary end or limit to the activities or functions of government. These activities might be reduced greatly from their present status, or they might be expanded until the government controlled all economic

activity. Hence, we greatly need a test which can be applied in deciding whether a given function involving a considerable expenditure should be assigned to a governmental unit or left in private hands. We may get some notion of the nature of such a test by giving thought to the purpose for which governments exist. Functions are given over to governments to perform, with the idea that services will in this way be rendered more efficiently and cheaply than they could be provided by each individual for himself. Thus it may be said that a function should be delegated to the government only when it appears that, bearing in mind the necessary costs of administration in collecting and disbursing the funds, together with whatever knowledge may be available as to the efficiency of the government in question, the expenditure of a given sum collectively will result in a more adequate and economical service than could be obtained by a similar sum privately spent.

A decision as to the aggregate amount to be collected and spent by governments in rendering the various services may be reached by having recourse to the familiar economic terms "satisfaction" and "productivity." Individuals spend their incomes for consumers' goods, usually after a consideration of the different amounts of satisfaction that are likely to be derived from the various alternative uses to which the funds in question might be put, or for producers' goods after a similar decision has been reached with regard to productivity. In other words, individuals tend to spend their incomes in such ways as will likely, all things considered, result in the realization of the greatest possible amount of satisfaction, or productivity, as the case may be. Applied to public expenditures, the principle as commonly stated is that additional funds should be collected and spent by the government just so long as the amount of satisfaction to be derived in the aggregate from the new services rendered is in excess of the amount lost in the aggregate by having to give over the funds in question to the government.

This principle should be modified to allow for the fact that a direct comparison of satisfactions is not always the one to be made. Funds may be spent and hence have to be collected in such amounts and such ways as will indirectly have the rather serious effect of restraining or depressing business. For this reason the principle should be stated as follows: A government should collect and spend such an aggregate sum that the advantage in the form of satisfaction to be gained by any further collections and expenditures will not be sufficient to offset the disadvantage of loss of satisfaction, either direct, or indirect through the ill effects on business, by reason of turning the funds in question over to the government. Furthermore, just as an individual attempts to distribute his income among the various objects of expenditure in such a way as to make the last dollar spent for each purpose afford him as much satisfaction as could be derived from a like expenditure for any other object, so too it

might be desirable to have the aggregate amount of expenditure of the government split up among the several governmental activities in such manner that no money will be spent for one purpose which would result in greater satisfaction if it were added to the sum to be spent for some other purpose.

Difficulties in the Use of This Test. It must be admitted that this test for public expenditures has its disadvantages. It has often been said that satisfaction is a matter which each individual must decide for himself, and which as a consequence cannot be accurately measured by some individuals for others. And yet, in applying this test for governmental activities and expenditures, it will be necessary for us constantly to form an opinion as to whether the satisfaction to be gained from a service to be rendered by the government will or will not exceed the loss of satisfaction, direct or indirect, suffered by the various contributors supporting the government by turning over the necessary funds in the form of taxes. In addition, the application of the test will require an accuracy of estimate and a nicety of judgment which are not always possessed by those who make decisions on questions of governmental activities and expenditures. In spite of these objections, it seems that the considerations set forth in the preceding paragraph are those which should be borne in mind in reaching such decisions.

EVALUATION OF GOVERNMENTAL FUNCTIONS AND EXPENDITURES

On the basis of this test, does it appear that certain activities of our several governmental units should be curtailed or dropped entirely? We may first express doubt that any net social advantage would result from a decision not to have the governments carry on the various functions which they were performing in the regulation and guidance of economic activity prior to 1929. Nor does it appear that greater satisfaction would be created by leaving in private hands the funds now being collected and spent by the governments for various social purposes. The need for these services has come upon us gradually and inevitably with the changes that have taken place in our social structure, and it does not seem that the responsibility for performing these functions could have been avoided under any circumstances. Under present conditions it is unthinkable that such matters as education, highways, and the provision of institutions for the care of dependents, defectives, and delinquents should be neglected. On the whole, it must be said that the great bulk of these activities of governments may be expected to stand up under the scrutiny of the proposed test for public expenditures. That is to say, these activities create sufficient satisfaction for the receivers of the services, or for society as a whole, to more than compensate for the loss of satisfaction to individuals

or damage to business which may result because funds are collected in order to make it possible to carry on these functions.

The Need for Expenditures for Protection. However, there is *ordinarily* more doubt whether a similar conclusion can be reached with regard to what is usually the principal activity of the national government—the provision of protection in one form or another. Expenditures for this purpose, as has been mentioned, make up a very large part of the total expenditures of our national government, and consist in the main of payment for past wars and preparation for those of the future. Without attempting to ascertain whether the wars of the past were necessary or the extent to which maladministration may have added to the costs of these conflicts, we may note that there is a conviction on the part of many persons that, *under ordinary circumstances and from the strictly economic point of view*, war is an unwise and costly method of “settling” disputes between nations. Modern wars almost inevitably bring economic losses, and not economic gains, to all the participating nations.

If the test of satisfaction is applied to this type of expenditure, there seems to be only one way in which the test may be stretched sufficiently to make it cover the activity. If the conditions of the world today are regarded as fixed, unyielding conditions to which we may react but which we cannot change, then preparation for war, and at times the actual waging of war, may be necessary. We do not want aggressor nations to be in a position to take our land and resources from us, or to destroy our institutions. To prevent such heavy losses, it may be worth while for us to bear the burdens involved in preparing for and waging war. Thus, war may be the lesser of two great evils, even if it results in severe economic losses. On the other hand, from the point of view of the world as a whole the billions of dollars spent for wars and armaments in the past and present have been and are economic waste. There would be a greater sum total of satisfaction from the use of economic goods if the world were freed from military conflict.

Depression Activities and Expenditures. What shall we say of the depression activities and expenditures of the federal government? From the point of view of a direct comparison of satisfactions, many of them would probably pass muster. Consider, for example, relief or work relief for the unemployed, which was the largest and probably the most severely criticized of the depression expenditures of the federal government. So far as governmental assistance was received by those who really needed it, it is hard to believe that these expenditures did not give more satisfaction to the recipients of the government's aid than they took away, or will take away, from the taxpayers. However great the pangs suffered by those who have paid or must pay taxes to cover relief expenditures, they are doubtless less painful than the pangs of death by starvation or exposure.

However, when we consider the indirect effects of the depression activi-

ties and expenditures, the answer is not so clear. The heavy expenditures had to be financed by either taxation or borrowing. To the extent that taxation was used, high taxes tended to cut into employment-creating private spending for consumption or investment as well as unnecessary saving. Moreover, some individuals in the higher tax brackets may have been rendered unwilling to put capital funds into risky ventures, since any gains which they might make would have to be shared with the government while any losses they might suffer would be almost entirely their own. To the extent that borrowing (deficit spending) was used to finance the governmental expenditures, business confidence may have been affected and fears of later higher taxes aroused, with adverse effects on the amount of production and employment furnished by private industries and businesses.

Funds for relief or work relief may have been used in some cases for political purposes rather than to promote recovery from the depression, and the receipt of governmental assistance probably weakened the morale of some persons and made them anxious to make a "career" of the W.P.A. or to "retire" on relief, rather than to shift for themselves in private employment. The laws of 1933 and 1934 may have cleansed and purified the issuance of securities and the operation of the security exchanges, but, according to some authorities, they also brought the issuance of new corporate securities almost to a standstill and greatly weakened the functioning of the security exchanges. Though the activities in behalf of labor greatly improved the bargaining power of employed workers, they may have made enterprisers less willing than they would otherwise have been to undertake production and furnish employment. Direct competition with private business by governmental enterprises or agencies, or even the threat of such competition, and the general attitude of hostility toward private industry and business on the part of the federal government, may have had similarly detrimental effects.

Other examples could be given, but those presented above may be adequate to suggest that the assumption by the government that the capitalistic system could not handle the situation may have led to governmental activities which increased the probability that capitalism would be unable to operate successfully. It is impossible to know whether our economic system as a whole was actually better off by (say) 1940 than it would have been if the federal government had not assumed responsibility for its operation and for the promotion of recovery in 1933. However, it is clear that the degree of recovery from depression which was effected under governmental control was disappointing, and that the recovery was far from complete at the outbreak of the World War II.

Proposed Governmental Activities and Expenditures. In evaluating governmental activities and expenditures which are proposed for the post-war period, such as the guaranty of full employment, the provision of

cradle-to-grave social security, and the underwriting of high minimum wages or minimum per capita incomes, it is not enough merely to compare the gain in satisfactions by the beneficiaries of these policies with the loss of satisfaction suffered by the taxpayers. As in the consideration of depression activities and expenditures, we must consider the effects on private businesses and industries, and on the economy as a whole. If, as some people think, an enthusiastic pursuit of the policies in question should make it impossible for our economic system to operate in capitalistic fashion and transform it into some form of controlled and planned economy, we might experience several unpleasant changes. Such changes would conceivably include the loss of economic freedom which would probably be surrendered in a planned and controlled economy, the possible loss of political freedom, the difficulties which might arise because of a lack of adequate incentives in the planned economy, and other matters which will be discussed in the chapters on collectivism in the latter part of the present volume.

The danger that expanding governmental activities and expenditures might lead us in the direction of a planned and controlled economy is far from negligible. The public debt of the federal government amounted to about 260 billion dollars at the end of 1947. Interest on this debt at 2 per cent would amount to about 5 billion dollars per year, and this would be merely the cost of carrying the debt. If any serious attempt were made to pay off the debt gradually, further large expenditures would be necessary. If the debt were not to be reduced in this fashion, it would have to be refinanced sooner or later and probably at higher rates of interest, which would have much the same effect on federal expenditures. Some persons who are relatively unconcerned about the size of the national debt seem to think that there is a limitless market for government bonds in this country at an interest rate of about 2 per cent; but we may doubt that this would be the case in peacetime and in a free market.

According to most pronouncements on the subject, our military and naval establishments, and the armed forces in general, will have to be maintained at a high level for some years to come, to protect us from unknown or unmentionable dangers and to enable us to play our part in international organizations for keeping the peace. The cost will surely run into several billions of dollars annually. We shall have other large expenditures for pensions, hospitalization, medical care, education, training, rehabilitation, and other projects undertaken for the benefit of veterans of World War II. Then we must add some billions of dollars for the operation of ordinary departments of government, others for an enlarged program of social security, and possibly still others for a federal guaranty of employment if full employment does not come about naturally. Some estimates of governmental expenditures for maintaining employment are as high as 10 or 15 billion dollars in some years—or even year

after year if there should be a chronic shortage of private spending for consumption and investment.

Just how large the annual expenditures of the federal government would be on the basis of these projects, and others which have been proposed, is uncertain, but most estimates call for federal expenditures far larger than those to which we have been accustomed in peacetime. Some persons are thinking in terms of only 18 or 20 billion dollars per year, but it is more likely that federal expenditures may run to 30, 35, or even 40 billions annually. Indeed, federal expenditures for the peacetime fiscal year 1947 amounted to more than 42½ billion dollars. Whatever the annual amount might be, the large expenditures of the federal government in the post-war period would have to be financed by means of taxation if we did not wish to add steadily to the already overgrown federal debt. This would call for the continuation of very high levels of taxation, possibly not far removed from those which prevailed during the latter years of World War II.

The point we have been trying to make is that our economic system probably could not operate in capitalistic fashion in peacetime if the government should find it necessary to take a very large part of the earnings or "profits" of business enterprises of all types through taxation, while leaving these same enterprises to bear unassisted the greater part of any losses which they might encounter. Moreover, such a situation would be most unfavorable for the expansion of the economy and the foundation of new enterprises on the basis of private capital. And this discussion of public finance ignores the important direct question of whether the government could maintain full employment, a high and controlled level of wages, and a complete system of social security in any case without assuming full control over the operation of the economic system as a whole.

PUBLIC BORROWING AND THE PUBLIC DEBT

The Growth of the Public Debt. The expenditures for carrying on governmental activities should ordinarily be made out of current revenues from taxation and other sources. In many years, however, all of our government units find it impossible to secure sufficient current revenue to meet their expenditures, and depend upon public borrowing to meet the deficit. Although the debts of state and local governments are also of significance, we shall center our attention upon the public debt of our federal government. This debt reached \$26,597,000,000 after World War I, but by 1930 it had been reduced to \$16,026,000,000.⁷ Since 1930, the federal government has had a large deficit every year and its debt has been mounting rapidly. It reached \$40,440,000,000 in 1939, after nine years of

⁷ Daily Statement of the United States Treasury, June 30, 1941.

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deficit financing of depression activities. Then, with heavy national defense and war expenditures added to an already unbalanced budget, the debt grew rapidly to \$136,696,000,000 in 1943, \$201,003,000,000 in 1944, \$258,682,000,000 in 1945, and \$269,422,000,000 in 1946, as is shown in Table 51. The 1946 figure amounted to \$1925 per capita.

TABLE 51. EXPENDITURES, REVENUES, DEFICITS, AND PUBLIC DEBT
OF THE FEDERAL GOVERNMENT, FISCAL YEARS 1931-47

(Source: Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics*, pp. 509, 510, 513; *Federal Reserve Bulletin*, September, 1946, pp. 1047-1949, and November, 1947, pp. 1401-1405)

Year	Expenditures (in millions)	Revenues (in millions)	Deficits (in millions)	Public Debt (in millions)
1931	\$ 3,652	\$ 3,190	\$ 462	\$ 16,801
1932	4,535	2,006	2,529	19,487
1933	3,864	2,080	1,784	22,610
1934	6,011	3,116	2,896	27,053
1935	7,010	3,800	3,210	28,701
1936	8,666	4,116	4,550	33,779
1937	8,177	5,029	3,148	36,425
1938	7,239	5,855	1,384	37,165
1939	8,707	5,165	3,542	40,440
1940	8,998	5,387	3,611	42,968
1941	12,711	7,607	5,104	48,961
1942	32,397	12,799	19,598	72,422
1943	78,179	22,282	55,897	136,696
1944	93,744	44,149	49,595	201,003
1945	100,405	46,457	53,948	258,682
1946	65,019	43,038	21,981	269,422
1947	42,505	43,259	754 ^a	258,286

^aSurplus.

Inflationary Dangers of Public Borrowing and an Increasing Public Debt. There can be no sound objection to governmental borrowing to meet an emergency, when revenues fall short. If a national emergency requires expenditures in excess of collectible revenues, the federal government would be foolish not to permit its budget to become unbalanced. When a man needs a surgical operation, he does not hesitate to call in the surgeon merely because the cost would unbalance his budget for that year. On the other hand, though the use of sulfa drugs may be indicated for pneumonia, they would scarcely prove beneficial as a steady diet. Continuing deficits of many billions of dollars per year may lead to the destruction of the government's credit. If the public debt grows so large that full payment of interest and repayment of principal become improbable, the government may eventually be unable to borrow from its people. If it is then unable or unwilling to decrease expenditures or increase ordinary revenues, it may resort to printing paper money with which to pay its bills. These inflationary tactics on the part of a government usually lead

to an economic breakdown from which a country may not completely recover for many years.

In World War II our federal government did not resort to printing paper money in order to pay its bills, but it did something not very different. Anxious to make total expenditures far in excess of the sums which it was thought possible or feasible to collect in taxes or obtain through direct sales of bonds to the people, the government resorted to sales of bonds to the banks in order to obtain the necessary funds. The banks paid for these bonds by creating demand deposits for the government to spend. In this way the government obtained large sums of purchasing power without reducing the funds available for civilian spending, and the total of government and civilian purchasing power became much larger than necessary to take off the market at stable prices all the commodities and services the economy could produce. The situation which was created was about as inflationary as though paper money had been printed to finance governmental expenditures, except that the people apparently are not driven into as great a panic by the creation of demand deposits as by the printing of paper money. A tremendous inflation of prices was avoided during the war period by resorting to direct price control, production control, rationing, and other devices, but these measures merely postponed the problem and did not eliminate it.

The Future Burden of the Public Debt. Another objection to our rapidly growing public debt runs to the effect that we shall be passing on to our children and grandchildren a staggering burden of debt which they will have to pay, to their own great detriment. This contention is difficult to evaluate. Clearly, in the sense of *real income*, future generations may not suffer from a large public debt incurred now. If the government borrows to buy wheat to feed its starving people, the wheat is taken not from the crops of thirty or fifty years hence, but from present supplies. If the government uses borrowed funds to induce farmers to plow cotton under, current crops (and not those which our children will harvest) are reduced. When the government spends billions of borrowed dollars for war goods, it causes a shortage of consumers' goods here and now, rather than in the more or less indefinite future.

What really happens when a government borrows directly from its people is that they are induced to turn over to it a part of their current money income. With these funds, the government is able to secure a larger share of our *present national real income* than it could otherwise obtain, and private individuals must get along with a smaller share than they would otherwise have. In the sense of real income, then, the cost of public borrowing is borne now in the form of a smaller real income for private purposes than would otherwise be available. And the effect may be much the same when the government borrows from the banks,

instead of directly from the people, provided ways can be found to sterilize part of the large money incomes which remain in the hands of private individuals.

From the *financial* point of view, it is certainly true that the government will have to collect taxes in the future in order to pay interest on its obligations, and possibly to pay part of the principal, but at the same time these amounts will be paid to the owners of the government bonds which represent our public debt. If the people who own the bonds also pay the taxes, even private individuals may "break even" on the process. But whether certain *individuals* gain, lose, or break even, it is clear that the *nation as a whole*, in paying off the public debt, merely transfers money from one pocket to another so long as the entire debt is held within the country. Such transfers, it is said, should not be very harmful.

On the basis of these and other arguments, some writers are inclined to scoff at the idea that our large public debt will give us trouble in the future. The size of the debt is a matter of small importance, since "we owe it to ourselves." While individual bondholders will need to be paid off from time to time, the principal sum of the debt as a whole will never have to be paid and our only concern should be the size of the interest payments in relation to our national income. Indeed, some writers consider it desirable to have a continually growing public debt, on the ground that large governmental expenditures in excess of current revenues will insure the existence annually of a total sum of purchasing power in the country large enough to take off the market all the commodities and services which the economy can produce at full employment. If we can keep the national income constantly growing in this way, even a total of interest payments which steadily increases in absolute size will not be a very severe burden.

In our opinion, however, a light-hearted attitude toward the future burden of the public debt is far from completely justified. When taxes are collected to pay interest on the debt or to repay principal, they may be so large in amount or be collected in such ways as to hamper and restrain production and employment and impair the effectiveness of our productive facilities. Indeed, these taxes may contribute significantly to a total burden of taxation which is so heavy that our economic system cannot support it and still operate in capitalistic fashion. Increases in the total of fixed income payments in the economy, such as interest payments on government bonds, tend to concentrate the risks of the system on those relatively few incomes which are drawn from the operation of business enterprises and the investment of venture capital. It has been estimated that the annual interest on a federal debt of \$300,000,000,000 would exceed the total of interest on private debts plus rents in a full-employment national income, and would equal one-fourth of the total business

income (dividends, plus income of unincorporated businesses, plus agricultural income).⁸

With our banks and other financial institutions loaded with government bonds, a general rise in interest rates which would cause government bonds (with their low fixed rates of interest) to depreciate sharply in value would be a matter of serious concern. Finally, the political implications of having a large class of persons dependent upon interest on government bonds for a considerable part of their income may be anything but favorable. The size of the public debt *may* be a matter of considerable importance in the future, even though we do "owe it to ourselves."

THE CONTROL OF PUBLIC EXPENDITURES

In reaching a conclusion as to the proper extent of governmental functions and expenditures, the first matter to be decided is whether we want our economic system to operate in capitalistic fashion in the future. If we do not, there are no limits on governmental functions and expenditures. If we do, then governmental expenditures should be held down to a modest size in relation to the national income in ordinary years, the expenditures should be paid for out of taxation, and an effort should be made to reduce the public debt gradually. Moreover, we should bear in mind continually the direct relationship which exists between the functions of government and the cost of government.

The Need for a Changed Public Attitude. Our extravagance in handling public funds in the past may be traced in large part to the desire of individuals to get a full share of the seemingly inexhaustible store of wealth in the public treasury. Inefficiency and corruption in government flourish when the public attitude is one of indifference, if not condonation. It is necessary that the people be made to understand that there is no such thing as "government money" apart from the contributions of those individuals who support the government by the payment of taxes, fees, and the like. Every expenditure of public funds means inevitably a definite burden in the form of taxes, either currently or later.

When a person is heard to complain about the high taxes exacted by the federal government, he should be asked his attitude toward the leading activities and expenditures of this government. If he believes that these activities and expenditures are necessary and desirable, he should be willing to bear his fair share of their cost. Again, it is scarcely reasonable or patriotic for one to demand that government funds be spent in his district for the erection of a court house or a post office or for the widening of a creek unless he expects to contribute in tax payments to

⁸ *Financing American Prosperity*, New York: Twentieth Century Fund, 1945, pp. 138, 139.

a fund that will enable other districts to have similar glorious but often quite unnecessary developments.

Indeed, as we have already pointed out, our legislators are able to obtain such appropriations for their districts only by cooperating with one another in a give-and-take fashion. Well-paved streets, magnificent highways, and ornate school buildings do not spring full-fledged from the ground. They can be constructed and maintained only at great expense, and this expense sooner or later must be borne by the taxpayers. Similarly, if the sight of human beings in want and misery causes a person's heart to bleed, so that he wishes them to be provided for by governmental action, he must remember that these functions of government will in the long run cause a drain upon his own purse. Surely a saner attitude toward public finance on the part of the people of the country will follow an understanding of the relation between taxation and public expenditures, and go far toward bringing about efficiency in the appropriation and administration of the public funds.

Efficiency in Government. The nature and extent of the functions which the government is to perform having been decided, it is the part of wisdom for a people to insure that public expenditures shall not exceed those amounts which, with reasonable standards of efficiency, may be required to carry on these activities. Carelessness, inefficiency, and corruption should not be tolerated. To eliminate such evils, many writers on public finance recommend a reform of the budgetary mechanism to obtain a closer adjustment of appropriations to needs and to fix responsibility, changes in the Civil Service Laws to bring a more efficient system of governmental employment, provision of security of tenure and more adequate salaries in order to attract higher types of employees into the government service, and, in general, the introduction of sound business methods into the operation of governmental affairs.

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1. Why is it desirable to have certain services provided by governments rather than by private agencies?
 2. What are the leading problems in connection with governmental functions and expenditures? Explain.
 3. What has been the trend in recent years in the volume of expenditures made by the federal government? Explain the nature of the principal items of expenditure.
 4. What has been the recent trend in the volume of expenditures made by state and local governments in the United States?
 5. Compare the chief functions and expenditures of the federal government with those of state and local governments.
 6. What relationship exists between the growth of population and the growth of public expenditures? Explain.

7. "A part of the increase in public expenditures in the United States in the twentieth century has been nominal, rather than real." What is the significance of this statement?
8. How does inefficiency in the appropriation and administration of public funds affect the total of public expenditures?
9. What is meant by "the popular attitude toward public money"?
10. How have economic and social changes been responsible for a part of the increase in governmental functions and expenditures?
11. What has been the influence of the growing spirit of humanitarianism upon governmental functions and expenditures? Why?
12. How did the great depression following 1929 affect governmental functions and expenditures? Explain.
13. Comment on the functions performed by the federal government during World War II, and those which have been proposed for the post-war period.
14. How can we reach a decision as to whether given individual functions should be performed by government? As to the appropriate total of governmental activities and expenditures?
15. In the light of the proposed test for public expenditures, how would you criticize the major items of expenditure of the various governmental units in this country in the past?
16. If, as some writers suggest, it is no less incorrect *economically* to speak of "winning a war" than to talk about "winning an earthquake," why is it that we spend so large a part of our national income for submarines, battle-ships, and bombing planes?
17. Comment on the necessity for the principal depression expenditures of our national government during the 1930's, in the light of the suggested test for public expenditures.
18. Evaluate the activities and expenditures which are proposed for the federal government in the post-war period.
19. "It is important to consider the indirect as well as the direct effects of governmental activities and expenditures." Explain.
20. Describe the growth of the public debt in recent years.
21. "There can be no sound objection to financing governmental expenditures through public borrowing." Discuss.
22. How may heavy public borrowing lead to inflation? Explain.
23. Is it true that the public debt of the federal government is certain to be burdenless in the future because "we owe it to ourselves"? Explain.
24. To what extent is it true that the burden of the public debt cannot be transferred to the citizens of future years? Explain.
25. "A light-hearted attitude toward the future burden of our large public debt is far from completely justified." Explain.
26. Why is there need for a changed public attitude toward public functions and expenditures?
27. How should we seek efficiency in the conduct of government?

REFERENCES FOR FURTHER READING

See list of references at the end of Chapter 44.

Taxation

ONCE IT HAS BEEN DECIDED WHAT FUNCTIONS SHALL BE PERFORMED BY governmental agencies, there remains the task of determining the method or methods of procuring the funds from which the proposed public expenditures may be made. At times the national governments have deemed it wise to manufacture their own purchasing power. In other words, they have printed large issues of inconvertible or "fiat" money which they have used in paying for the governmental functions. The effect of this additional purchasing power, competing with the money already in circulation for the existing supplies of commodities and services, has been to deprive the individual citizens of a part of their purchasing power just as effectively as if the governments had exacted tribute from these citizens in the first place.

As we noted in the preceding chapter, governments have commonly borrowed to obtain funds for public expenditures. This method has been used whenever it has appeared undesirable or impossible to obtain sufficient funds for current expenditures from current sources of revenue. By borrowing, we get government services in the present and pay for them on the installment plan over a long period of years. Occasionally certain units of government secure small amounts of revenue from the conduct of various public service enterprises, but this is not ordinarily an important source of public income.

The Nature of Taxation. The most important source of the funds from which public expenditures are made has been and will doubtless continue to be taxation. A tax is "a compulsory contribution from the person to the government to defray the expenses incurred in the common interest of all, without reference to special benefits conferred."¹ In connection with this definition several observations should be made. First, a tax is a compulsory contribution in that the amount to be paid is decided by the government, as are also the time and methods of payment, without regard for the wishes of the individual taxpayer. In the second place, there is in taxation no definite *quid pro quo*; that is, the taxpayers are required to contribute to the support of the government on some basis other than the amount of benefit or service directly re-

¹ E. R. A. Seligman, *Essays in Taxation*, New York, The Macmillan Company, 9th ed., 1921, p. 432.

ceived by them from the government. It often happens that the persons called upon to pay the largest taxes are those who are least dependent on governmental services and who could best provide for themselves if the services in question were not performed by the government. Finally, the purpose of a tax is to provide revenue for carrying on various functions in the interest of the public. In this connection a serious question often arises as to whether a tax may properly be made the instrument for the accomplishment of some ulterior purpose, such as the reduction of existing inequalities of wealth and income.

The Problem of Taxation. Since all governmental units of the present day find it imperative to obtain the greater portion of their revenues from taxation, the problem of taxation becomes one of securing these necessary revenues in such manner as will, among other things, involve the smallest possible expense in collection and administration, interfere as little as possible with the conduct of business and economic progress, and distribute the burden of supporting the government in as equitable a manner as possible.

GENERAL PRINCIPLES OF TAXATION

Fiscal Adequacy. Since the purpose of taxation is to provide large amounts of revenue for the different units of government, the first and most important test of a tax system is whether it will furnish sufficient revenue. The satisfaction of this test alone does not insure a perfect system of taxation, for many other important considerations must be borne in mind; but the inability to meet this test is of itself quite enough to make a tax system a failure. It matters little how convenient, economical, or simple the system is, or how well it succeeds in distributing the tax burden according to the high principles of equity and justice, if it does not provide the necessary revenue for the performance of the functions of government. Indeed, in times of great emergency—such, for example, as when a war is being waged—other factors are disregarded and the sole consideration of the government in passing upon tax rates and methods becomes that of fiscal adequacy.

Economy. As has been said, a tax system is set up in order to obtain a certain amount of revenue which is necessary for the performance of governmental functions. A sum must be collected from the taxpayers, however, which is larger than the amount to be spent by the government in question, in order to cover the costs of collecting and administering the taxes. Other things being equal, taxes which involve the collection of large increments of revenue, with a minimum of complaints and book-keeping details to be handled, are preferable to those which necessitate the collection of a multitude of small sums and involve great complexity of administrative machinery. In the words of Adam Smith, "Every tax

ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state."

However, in connection with the test of economy, as well as with that of fiscal adequacy, the effects of taxation on the taxpayer and upon business in general must be considered. No tax is fiscally adequate, however great the revenue which it produces, and no tax is economical, however small its cost of collection and administration, if it is levied in such fashion or to such extent as to discourage business activity, curb individual initiative, or check unduly the accumulation of capital. It would be possible to devise a very simple system of taxation, the burden of which would rest entirely upon large incomes and large accumulations of wealth; but while this system might be a marvel of adequacy and economy for a time, its long-run results might easily be disastrous because of its effects on capital accumulation and business initiative. Almost everyone admits the validity of this principle, but there are great differences of opinion as to the exact point at which these undesirable effects would show themselves if higher and yet higher taxes were assessed on large incomes and great stores of wealth.

Simplicity, Certainty, and Convenience. Simplicity is another desirable feature of a tax system. The provisions of our tax laws should not be complicated, but should be so worded that they may readily be understood by those who must pay the taxes as well as those who administer the tax laws. It is scarcely likely that any system of taxation could be set up which would be understood in all its ramifications by all the taxpayers and officials concerned, but it is certain that our present laws leave room for a large measure of progress in the direction of simplification.

A sound tax system will also be characterized by certainty. It is probable that our economic system could in the long run become adjusted to either a high or a low level of taxation with something like equal success, but uncertainty seems ever to be productive of undesirable results. Witness, for example, the effect of uncertainty as to the provisions of an impending tariff bill upon business activity in the United States! Uncertainty in taxation also provides many opportunities for chicanery and corruption in the assessment and collection of taxes.

Taxes should be collected at such times and in such a manner as will be most convenient for the taxpayers. It is not possible, of course, to have all taxes marked by convenience of payment, but we retain some taxes, such as those on commodities, which are very convenient to pay though they fall far short of perfection with regard to some of our other tests. In general, convenience of payment is a desirable quality whenever it can be obtained.

Elasticity. Writers on the subject of money and banking are in general agreement that one of the principal defects of our money and credit

system prior to 1913 was its inelasticity. The quantity of money and credit could not be enlarged sufficiently to meet the emergency needs of business, and recurrent periods of monetary stringency and even financial panics resulted. Inelasticity is a serious defect in a system of taxation also, for it means that the revenue received from the taxes in operation cannot be expanded to meet the larger needs which may be experienced from time to time. Consequently, if the tax system lacks elasticity, there are likely to be frequent deficits and a dependence on borrowing to secure the funds with which to meet current obligations.

Equity. A final requisite for a sound tax system is that it shall be equitable. Once it is ascertained that a given system of taxation is likely to provide an adequate amount of revenue, the next most important consideration is to have the tax burden distributed among the taxpayers in an equitable manner. This consideration becomes increasingly significant as the size of the aggregate volume of taxation increases. Years ago, when public expenditures were relatively slight and the total burden of taxation was not heavy, almost any system was likely to be reasonably fair. This would not be true at the present time. In view of the importance of the principle of equity, it will be well to inquire further into its meaning as applied to a system of taxation.

The Benefit Theory of Taxation. Many persons have held in the past that a tax should not be defined as we have defined it, but should be considered a payment to the government because of, and in proportion to, benefits received from it. Thus a person who benefited greatly at the hands of the government would be expected to pay a large sum in taxes, while one who derived but slight satisfaction from services rendered by it would not be asked to give any considerable portion of his income to its support. However, though the benefit principle seems very just in theory, it has been largely abandoned because of the apparent impossibility of applying it in practice. In the first place, it is not possible to determine exactly how much benefit each citizen receives from the government. Here we are dealing with the matter of individual satisfactions, which cannot be accurately appraised except by each for himself. In the second place, even if benefits could be correctly estimated, we might find that the persons receiving the largest benefits from the services rendered by the different governmental units were the very ones who were least able to spare any great amount in taxes to pay the costs of such services. On the other hand, as we have already said, those with very large means might well be able to provide for themselves many services now rendered by the various governmental units. Thus they would be less dependent than the poor upon these services, and could not be called upon to make any large contributions to the government on the basis of the benefit principle.

The Principle of Ability to Pay. Most economists and writers on public finance at the present time have gone over to the principle of ability to pay, which holds that each individual should be taxed, for

the most part, according to his ability to make contributions to the support of the state, without regard to the amount of benefit he may derive from the activities of the government. This principle seems on the surface to be admirably simple, but its interpretation is extremely difficult. What, for example, shall be the test of ability to pay? The answer to this question used to be that the possession of property was a clear indication of ability to pay taxes, and it was decided that any man who was fortunate enough to own great quantities of wealth should be required to contribute large amounts to the governmental treasuries. As time went on, economists came to suspect that some modification of this answer was necessary, for many individuals were receiving large incomes annually but were escaping the tax-gatherer altogether under the prevailing system of general property taxes.

Income as an Indicator of Ability to Pay Taxes. It may be said that today the greatest emphasis is placed upon income as a test of ability to pay, although property is by no means completely disregarded in this connection. This does not mean, however, that it is necessary merely to discover the amount of a person's income in order to pass judgment on his ability to pay taxes. Many other matters must be borne in mind, such as whether the income in question is "earned" or is derived from investments, whether it contains any elements such as the return on diminishing assets, whether it represents any surplus over and above the returns necessary to induce the individual to continue to perform his services or lend his capital, and, finally, the length of time over which the income is received.

Proportion vs. Progression. Probably the most important question in connection with the principle of ability to pay relates to the way this ability increases as income increases. In other words, as a man's net taxable income increases, does his ability to pay taxes increase exactly in proportion to this increase, or more or less slowly? If A has a net taxable income of \$10,000, while that of B is \$5000, is A able to pay exactly twice as much in taxes as B, more than twice as much, or less than twice as much, supposing the considerations mentioned in the preceding paragraph to be the same for both individuals? These are questions that can be answered only after a further examination of the meaning of the principle of ability to pay. If we decide that A's ability to pay is exactly twice as great as B's, then taxation should be proportional—that is, the same rate should apply to both individuals—and at this rate A's contribution will be double that of B. If A has less than twice the ability of B to pay taxes, the rates of taxation should be regressive, that is, a lower rate should apply to the larger income than to the smaller. Finally, if A's ability to pay taxes is more than double that of B, the rates of taxation should be progressive, that is, the greater the income the higher the rate of taxation which is applicable to it.

The advocates of progressive taxation base their arguments in large

measure on the theory that the satisfaction to be derived from the expenditure of a unit of money income diminishes as the total income of the spender increases. A certain amount of income is necessary as a minimum for subsistence, and does not represent ability to pay in the true sense of the term. The first increments of income above this minimum amount are used by the individual to satisfy urgent wants, while further and yet further additions to income will be used to satisfy less and still less important wants. It follows that, unless we are dealing with individuals who choose to satisfy their less pressing desires before attending to those which are more urgent, diminishing satisfaction is experienced in the expenditure of successive increments of income. Thus, it is held that the man with an income of a million dollars a year is not losing nearly so much satisfaction when compelled to give up one hundred thousand dollars in taxes as is the man with ten thousand a year when he contributes a thousand dollars to the support of the government, although it is clear that the rate is the same in these two instances. It may seem equitable, then, for the recipients of large net taxable incomes to pay taxes at higher rates than those applied to men receiving smaller incomes, which means, of course, the use of progressive rates of taxation.

Since there is no way to make accurate direct comparisons of utilities or satisfactions between different individuals, and since it is by no means certain that all individuals have equal capacities for experiencing satisfactions, it is impossible to *prove* that this analysis in support of progressive taxation is sound. However, most students of public finance are satisfied that progressive rates of taxation should be used wherever they can be successfully applied—which means for all practical purposes in the taxation of incomes and inheritances. It should be apparent that a progressive tax upon a commodity, say cigarettes, which would mean a high tax if the purchaser were rich and a low tax if he were poor, would not be practicable. Once it is decided that taxes should be progressive where possible, there remains the problem of deciding how progressive they should be, and here we must consider the indirect as well as the direct effects of taxation. That is to say, taxes might be made so highly progressive that they would discourage business activity, curb individual initiative, and check unduly the accumulation of capital.

The Incidence of Taxation. In deciding whether a particular tax system is equitable, it is of vital importance to know who ultimately bears the burden of the various taxes levied. It has long been customary to divide taxes into two classes, direct and indirect. *Direct taxes* are those which are collected at the outset from the persons upon whom it is intended that the burden shall fall, such as a tax on the rent of land. *Indirect taxes* are those collected from one group of individuals with the expectation that the burden will be shifted by them to a different group. The classification of taxes into direct and indirect groups has proved to be

unfortunate. In some cases, we find so-called direct taxes being passed on, in part at least, to others than those from whom the tax was originally collected, while at other times so-called indirect taxes have not been shifted, but have remained a burden upon those who paid them in the first place. Wholly apart from any classification, however, the problem of the "incidence," or ultimate burden, of taxation is extremely important.

The study of the shifting and incidence of taxation is a branch of the study of value. To know whether a tax on a given commodity is likely to be shifted, it is necessary to ascertain whether the conditions of production and sale for that commodity make it possible for its price to be raised so as to pass the amount of the tax on to the consumers, or for the tax burden to be passed backward to the suppliers of certain productive agents in the form of lower prices. If the tax in question is levied on some agent of production, such as land or capital, it is necessary to make a similar investigation into the conditions which determine the price of that agent of production, in order to discover whether the tax can or cannot be shifted.

TABLE 52. SOURCES OF FEDERAL REVENUE, FISCAL YEARS 1945 AND 1946

(Sources: *Federal Reserve Bulletin*, September, 1946, p. 1049. *The Economic Almanac for 1946-47*, pp. 290, 291.)

Source of Revenue	Amount Received in 1945 (in millions)	Per Cent of Total Revenue 1945	Amount Received in 1946 (in millions)	Per Cent of Total Revenue 1946
Personal income tax	\$19,034	39.9	\$18,705	42.3
Corporation income tax	4,880	10.2	4,640	10.5
Excess profits taxes	11,148	23.3	7,913	17.9
Capital stock tax	372	0.8	352	0.8
Payroll taxes	1,793	3.8	1,714	3.9
Estate and gift taxes	643	1.3	677	1.5
Excise taxes	5,945	12.5	6,684	15.1
Customs duties	355	0.7	435	1.0
Non-tax revenue	3,570	7.5	3,119	7.0
Total revenue	\$47,740	100.0	\$44,239	100.0
Total net revenue ^a	\$46,457		\$43,038	

^a Total revenue less social security employment taxes, which are appropriated directly to the Federal old age and survivors insurance trust fund.

THE FEDERAL REVENUE SYSTEM

As may be seen in Table 52, the federal government had a total revenue of \$44,239,000,000 in the fiscal year 1946, and a total net revenue of \$43,038,000,000. Comparable figures for 1945 were \$47,740,000,000 and \$46,457,000,000. Of the total revenue in 1946, the personal income tax

yielded 42.3 per cent; all corporation taxes, 29.2 per cent; payroll taxes, 3.9 per cent; estate and gift taxes, 1.5 per cent; excise taxes, 15.1 per cent; customs duties, 1.0 per cent; and non-tax sources, 7.0 per cent. These figures may be compared with those for 1945, when the personal income tax yielded 39.9 per cent; corporation taxes, 34.3 per cent; payroll taxes, 3.8 per cent; estate and gift taxes, 1.3 per cent; excise taxes, 12.5 per cent; customs duties, 0.7 of 1 per cent; and non-tax sources, 7.5 per cent. (The total net revenue of the federal government in the fiscal year 1947 amounted to \$43,259,000,000, including \$19,343,000,000 from individual income taxes, \$9,676,000,000 from corporation taxes, \$779,000,000 from estate and gift taxes, and \$7,285,000,000 from excise taxes.) We shall now turn to an examination of these several types of taxes.

The Personal Income Tax. The taxation of personal incomes was the most important source of federal revenue in 1946. In applying the tax, after the deduction from gross income of the necessary expenses of acquiring it and a number of other allowable deductions, the individual taxpayer was allowed an exemption of \$500 for himself and \$500 for each dependent. The rest of the taxpayer's income was subject to a normal tax of 3 per cent, and to surtaxes beginning at 17 per cent on the first \$2000 of eligible income and running up to 88 per cent on all such income in excess of \$200,000. However, the taxpayer's actual tax liability was limited to 95 per cent of his total tax as computed on this basis, and to 85.5 per cent of his net income.

In 1946, normal taxes and surtaxes on wages and salaries of \$5000 or less were being withheld by employers and paid directly to the government. Individuals with incomes of more than \$5000 from wages and salaries, or with incomes of more than \$100 from other sources (providing the total income was at least \$500), had to file an estimate, by March 15, of their total tax liability, the amount of tax which would be withheld from them, and their net tax liability to the government. One-fourth of the latter sum had to be paid at once, and the remainder in three installments on June 15 and September 15, 1946, and January 15, 1947. Then, by March 15, 1947, all payers of the personal income tax had to file a final return, adjusting their actual tax liability to the payments which had been made during the year by withholding or otherwise.

Merits of the Personal Income Tax. The personal income tax is generally considered to be a good tax. It falls directly on income, from which all taxes must come eventually, if sometimes indirectly; and income is the most widely accepted indicator of ability to pay. The tax usually yields a large revenue but, being based on realized income, the receipts are likely to decline sharply in times of business depression when the government needs especially large revenues. The tax lends itself readily to progressive rates, which are usually thought necessary to the application of the principle of ability to pay. It is certain as to time and manner

of payment, but is only moderately satisfactory from the point of view of economy in collection. Finally, because of the progressive rates of the personal income tax, the collection of a given amount of revenue by means of this tax tends to inhibit consumption expenditures to a lesser extent than would the collection of the same amount of revenue by means of excise or payroll taxes, which bear directly on income destined for consumption.

Defects of the Personal Income Tax. Although repeated attempts have been made to simplify income tax procedure for the small taxpayers, the personal income tax law remains complicated, and a person of considerable income often needs legal advice in arriving at the amount of tax he must pay. Except for the withholding of the tax on wages or salaries of \$5000 or less, the method of assessment is by the taxpayer's declaration of his income, expenses, and deductions, supplemented by information (furnished by employers and others who make the payments) as to amounts paid in salary, interest, or other types of income. This method of assessment requires a high degree of administrative efficiency if the tax is not to be merely a tax on honesty and to lead to widespread evasion.

It is difficult to define income for purposes of taxation, and our laws do little more in this respect than to enumerate various taxable and non-taxable items. Under the law, as now interpreted, some peculiar situations arise. For example, a farmer need not count as taxable income the food and shelter provided by his farm, but no similar privilege is accorded those who must buy their food and shelter with money income. A house owner who occupies his house need not count as taxable income the shelter he enjoys, but if he rents the house to another the rental that he receives is taxable. If a man is buying a house through payments over a long period of time, the interest that he pays on his indebtedness is deductible from income for tax purposes, but he has no such deduction if he buys the house outright for cash. If the individual owns a corporate bond, the interest received is subject to the income tax, but the same thing is not true if he owns a "tax-exempt" bond issued by some governmental unit in the past.

Another difficulty in connection with the personal income tax is found in the treatment of capital gains derived from the sale or exchange of assets. If a taxpayer's surtax net income is less than \$18,000, net long-term capital gains must be included in ordinary income, and will be subject to a combined normal tax and surtax of from 20 to 50 per cent (under the law in effect in 1946). However, since only 50 per cent of long-term capital gains need be counted as income, the *effective* rate of taxation for these gains is from 10 to 25 per cent. If the taxpayer's surtax net income is \$18,000 or more, he is allowed to pay a flat tax of 50 per cent on the net long-term capital gain reported, but the amount reported as income is only 50 per cent of the actual gain, so that the effective rate of

taxation is 25 per cent. Thus, long-term capital gains are never subject to an effective rate of taxation higher than 25 per cent, and the rate may be substantially lower.

This preferential treatment of capital gains interferes considerably with the progressiveness of the personal income tax, for capital gains are likely to constitute a larger part of the total income in the higher than in the lower surtax brackets. Moreover, it is sometimes possible to convert other types of income into capital gains in order to avoid paying high surtax rates. If, for example, one is selling, at a profit, a capital asset that is to be paid for on the installment plan, with interest to be paid by the buyer, it may be better to add the total amount of the interest to the price of the asset (so that it will appear as a capital gain) than to have interest as such paid with each installment of the principal. The reason is, of course, that interest as such is subject to the full normal tax and surtax, whereas the effective rate of taxation applicable to long-term capital gains cannot exceed 25 per cent. Finally, the preferential treatment of capital gains applies to gains from purely financial speculation and other sources, as well as to those which often form an important part of the profits from new ventures in business or industry.

The most serious defect of the personal income tax, under the present highly progressive rates, is its effect in discouraging enterprise and personal initiative. In combination with taxes on corporate income, it imposes heavy double taxation on income derived from corporate ownership. By itself, it discourages self-employment by individuals and the founding of unincorporated enterprises. The income from business ownership is always uncertain, and this is especially true of the income from new ventures; yet the personal income tax takes a considerable part of any net income received, and it permits only a relatively meager offset for losses. The tax is especially restrictive for individuals who already have large incomes. Why should the movie star undertake another picture this year if all the additional income derived from it will be subject to an 88 per cent tax, and why should the well-to-do individual undertake a new and risky business venture under the same circumstances?

The Incidence of the Personal Income Tax. The usual conclusion with regard to the incidence of the personal income tax is that its burden remains on those who pay it and that it cannot be shifted. It is argued that there is nothing about the income tax that enables individuals or companies to raise the prices of the goods they are selling, or makes the personal services or the capital furnished by individuals command a higher return. Consequently, it is said, all efforts to pass personal income taxes on to others are doomed to failure. This is undoubtedly a sound conclusion so far as the individual taxpayer is concerned. However, in the long run, if enough people were discouraged from undertaking business ventures or entering high-paying occupations, those who still

did these things might obtain large enough incomes so that, after paying the tax, they would have as much income left as they would have had in a previous situation in which the tax had not yet been imposed.

Taxes on Corporations. The corporation income tax produced 10.5 per cent of the total federal revenues in 1946. The normal tax rate was 24 per cent for corporations with net incomes in excess of \$25,000, and 15 to 19 per cent for corporations with smaller net incomes.² The surtax was 14 per cent for corporations with net incomes in excess of \$50,000. Corporations with net incomes between \$25,000 and \$50,000 paid 6 per cent surtax on the first \$25,000 and 22 per cent on the balance, and corporations with a net income of less than \$25,000 paid a straight 6 per cent surtax.

Excess profits taxes produced 17.9 per cent of the total federal revenues in 1946. Most of this revenue was yielded by the excess profits tax applied in 1940 (sometimes called the "main" excess profits tax to distinguish it from the "declared value" excess profits tax). For the purposes of this tax, each corporation received a flat exemption of \$10,000, plus a further credit computed by either of two methods—net income or invested capital. By the net income method, the credit amounted to 95 per cent of the average net income of the corporation in the period 1936–39, plus 8 per cent of net capital additions or minus 6 per cent of net capital reductions. By the invested capital method, the credit was 8 per cent of invested capital up to 5 million dollars and 7 per cent of invested capital over 5 million dollars. After the deduction of the exemption and the credit, each corporation (unless specifically exempted by law) paid the excess profits tax on the remainder of its income at the rate of 95 per cent, subject to a refund of 10 per cent of the tax later on. The main excess profits tax was repealed by the Revenue Act of 1945, effective January 1, 1946, but continued to yield revenue in the *fiscal year* 1946.

In addition to the corporation taxes already described, the capital stock tax and declared value excess profits tax produced small amounts of revenue in 1946. These taxes had been paired as complementary taxes since 1933. The rate of the capital stock tax was \$1.25 per \$1000 of the declared value of each corporation's capital stock. Having declared a total value for its capital stock, a corporation could earn 10 per cent on this value without paying any declared value excess profits tax. However, it had to pay 6.6 per cent on net earnings of 10 to 15 per cent, and 13.2 per cent on net income in excess of 15 per cent, of the total declared value of its capital stock. The capital stock and declared value excess profits taxes yielded some income in the fiscal year 1946, but were repealed by the Revenue Act of 1945, effective January 1, 1946. Under these various taxes on corporations, as described, it would seem that a corporation

² Excess profits taxes were deductible in determining income subject to the normal tax.

might have had to pay more than 100 per cent of its net income in taxes to the federal government, but such disasters were forestalled by a general proviso that all corporate taxes together must not take over 80 per cent of any corporation's net income.

Evaluation of Taxes on Corporate Income. The corporation income tax has usually been a good revenue producer although, like the personal income tax, its yield diminishes greatly in poor business years. This tax is not open to some of the objections urged against the personal income tax, though in the case of both it is difficult to decide what constitutes net income. Excess profits taxes also amount to very little in years when the level of economic activity is low or moderate, but they produce large amounts of revenue in prosperous years, and especially in wartime, when they are useful in preventing war profiteering. Excess profits taxes are often complicated, for it is very difficult to make them both fair and simple. They often give rise to extensive litigation and impose a severe test on the federal administrative machinery.

The various taxes on corporate incomes, considered together, are subject to certain criticisms, noteworthy among which is the suggestion that they do not conform to the principle of ability to pay. Many people contend that a corporation has no ability to pay taxes apart from the ability of its stockholders to pay. If this is true, we must note that the size of a corporation's net income has no necessary relationship to its stockholders' ability to pay taxes. One corporation with a moderate net income may distribute it in large amounts to its few (and possibly well-to-do) stockholders, while another with a huge net income may pay this income in small dribbles to its hundreds of thousands of small stockholders. In such a case, a small tax on the former corporation's income and a heavy tax on the latter's will not cause the respective stockholders to give up income in accordance with the principle of ability to pay.

It is also commonly held that taxes on corporate income, in combination with the personal income tax, lead to double taxation of the same income. When the corporation receives net income, it pays the corporation income taxes, and any other levies on corporate income which may be in effect at the time, and then pays dividends to the stockholders. The dividends then become personal income to the stockholders and are subject to both the normal personal income tax and the surtax, if the stockholders' incomes are sufficiently large. This is unquestionably double taxation and it penalizes severely the income drawn from corporate ownership as compared with other types of personal income. This criticism still applies, though with somewhat reduced force, now that the excess profits taxes have been abolished.

The Incidence of Taxes on Corporate Income. The above argument concerning double taxation assumes that taxes on corporate income cannot be shifted forward to consumers of corporate products or backward to

the owners of productive agents used by corporations, but remain as a burden on the corporation and its owners. This assumption is probably valid for most practical purposes, since the taxes in question fall on the net income realized from business operations in a given period and do not affect directly the marginal costs of the firms or give them any direct ability to raise prices. If any shifting of the tax occurred, it would be over long periods of time and in industries made up largely of corporations and not severely regulated by the government. The process would involve the lowering of the attractiveness of investments in corporate enterprises and reducing investment, with the result that surviving corporate firms could get higher prices and possibly as much net income as before the heavy taxes were applied. Any shifting that occurred in the long run would not, of course, alter the fact that double taxation had existed in the meantime.

Payroll Taxes. In 1946, payroll taxes produced 3.9 per cent of the total revenue of the federal government. These taxes are collected for the accumulation of reserves required under the Social Security and Railroad Retirement Acts. The taxes levied under the Social Security Act have been described in Chapters 25 and 26. Considering payroll taxes from the point of view of public finance, we suggest that those which fall on the employees operate as a crude sort of income tax, for all employees who come under the Act pay the same percentage of their wages. The taxes paid in the first instance by the employers will tend to be shifted to either the workers or the consumers, and will be regressive in operation. It would probably be better, from the point of view of equity, to support the various old age and unemployment projects out of general revenues, but the tax-consciousness promoted by payroll taxes may be desirable.

Estate and Gift Taxes. The combination of estate and gift taxes produced only 1.5 per cent of the total federal revenues in 1946. The estate tax is applied to estates as a whole rather than to shares received by individual heirs. The first \$60,000 of an estate is exempt, and the tax rates in 1945 ranged from 3 per cent on the parts of estates which barely exceeded the exemption, to 77 per cent on the parts of estates in excess of \$10,000,000. Credit was given against the federal estate tax for 80 per cent of any amount which was paid in taxes under state inheritance tax laws. The gift tax, which is necessary to prevent evasion of the estate tax through transfers of wealth between living individuals, had rates three-fourths as great as the estate tax rates.

The estate and gift taxes can be relied upon to produce a fair amount of revenue, but they are not a good source of increased revenue if the increase must be made available suddenly. The estate tax unquestionably accords with the principle of ability to pay. Inherited wealth is purely a surplus return to the heir, and is entirely unearned by him. The greater the amount that society permits to be passed on through inheritance, the

greater is the share which society may legitimately claim from an estate. The incidence of the tax is clear. Its burden rests wholly upon the receivers of the estate and cannot be shifted. The tax is certain as to amount, and as to time and manner of payment.

Objections to Estate Taxes. There are, however, at least two possible objections to the estate tax which the government should be careful to meet. In the first place, it is argued that, if the tax is too high, it will lessen the efficiency of business men and slow down the process of saving and capital formation. It is said that one of the strongest motives for working to acquire a large income, and for saving and accumulating a fortune, is the desire to provide adequately for one's dependents. If the inheritance tax is very high, some men might not seek to acquire large incomes, or might spend them for current enjoyment, and as a consequence the vital process of saving and capital formation would languish.

There is undoubtedly some truth in this contention. The desire to provide adequately for dependents is one reason why men work, save, and accumulate. However, there are many other motives operating in the same direction, such as the desire for luxurious living, the wish to provide for one's old age, and a yearning for prestige and power; so that capital formation probably would not cease even if inheritance were entirely eliminated. In any case, the present federal taxation of estates is not likely to have any detrimental effects upon our economic system, for \$60,000 may be passed on free of tax, and estates of even \$100,000 or \$200,000 are not greatly reduced by the tax. Indeed, some authorities on taxation urge that the estate tax rates should be increased and the exemptions lowered, with particularly high taxes applied to properties which were inherited twice or oftener. It is urged, also, that gift tax rates in the lower brackets should be raised, so that they will no longer provide so attractive a means of evading the higher rates of the estate tax.

Another objection to an estate tax is its inconvenience in payment. Many estates are left largely in the form of real estate, factories, machinery, and securities, and not in cash. Unless the heirs have other large sources of income, they may have to liquidate the inherited properties to pay the tax and, at a forced sale, might have to sell at a considerable loss. In this way, an heir might lose 40 or 50 per cent of the value of an estate on which the estate tax was only 25 per cent. This objection is taken care of, to some extent, by granting a reasonable period of time within which to pay the tax, and by providing for the revaluation of an estate if its value has declined between the date of death of the decedent and the date on which the tax must be paid.

Excise Taxes. In 1946, excise taxes of various kinds produced 15.1 per cent of the total revenues of the federal government. Excise taxes are taxes on economic goods. In some cases, producers are required to buy and affix stamps to the articles they make and sell. Again, the pro-

ducers may be required merely to pay the government a certain amount per unit of product produced and sold. Some of the taxes are specific, as for example a tax of (say) 5 cents per package of 20 cigarettes; others are ad valorem taxes, such as a tax of 10 per cent on the factory price of automobiles.

The Incidence of Excise Taxes. While excise taxes are usually collected from the producer in the first instance, their burden is borne in the end by the ultimate consumer when the taxed goods are made under competitive conditions. The tax is shifted through increases in the prices of the taxed articles, for excise taxes are costs of production to the producers of the goods and must be covered by price if production is to continue. However, the process of shifting is not the simple one of adding the taxes to the old prices. According to the Law of Demand, an attempt to raise the price of a taxed article will decrease the volume of sales. The extent to which an increased price will curb sales depends upon the elasticity or inelasticity of demand, but some decrease in sales is inevitable if the total demand for the good remains the same as before. A decreased volume of sales results in a decreased output of the good, and this change of output is likely to cause a change in the manufacturing costs of producing the good in the period of current production. Since the new manufacturing cost may be either higher or lower than before, depending upon whether the former output was greater than, equal to, or less than normal capacity, the price of the taxed article may increase by either more or less than the amount of the tax, in the process of shifting the tax to consumers. The effect upon price also depends to some extent upon whether the tax is specific or ad valorem.

Under conditions of monopoly, partial monopoly, or imperfect competition, the shifting of excise taxes is less certain than under competition. The monopolist or partial monopolist does not care who pays the excise taxes. His only concern is to set output and price at figures which will bring him the greatest possible total net revenue from the production and sale of his good. In some cases, his former output and price may have been so much more profitable than any other combination of output and price that he will be better off in terms of total net revenue to leave both unchanged and bear the tax himself, instead of attempting to shift it to consumers by raising price and reducing output. In other cases, a new combination of output and price would doubtless be more profitable than the old one, after the imposition of the tax, and as a consequence the monopolist would raise price and decrease output.

The Merits and Demerits of Excise Taxes. In general, the burden of taxes on commodities and other economic goods, no matter where it is first placed, tends finally to fall as a whole or in large part upon the consumers. Because of this fact, these taxes, judged by themselves, do great violence to our principle of ability to pay. They are not progressive, nor

are they even proportional to income. People with large incomes pay these taxes in greater absolute amounts than people with small incomes, but the percentage of total income spent for economic goods subject to excise taxes tends to decline as a person's total income increases. Therefore, these taxes take away a smaller *percentage* of a large than of a small income, and are regressive in operation. This does not mean that they should never be imposed, for their bad effects may be quite offset by other taxes in the system. Excise taxes have been good revenue producers in the past, and have been considered a rather elastic element in the tax system. Their convenience in collection and payment is well known, for they "get the feathers with a minimum of squawking." They are often included in the prices of articles in such a way that most consumers are unaware that they are paying them.

Customs Duties. Customs duties, or duties on imports, produced only one per cent of the total federal revenue in 1946. These taxes have lost importance rapidly, for at one time they produced almost all the revenue of the federal government. With the United States operating under a high protective tariff, revenue from import duties is largely incidental. The main purpose of the tariff is to protect American industries by excluding foreign products from our markets, and a protective tariff which was completely successful in this respect would produce no revenue. Import duties paid on commodities from abroad ordinarily have the same incidence as taxes on the production of domestic commodities; that is, they fall on the final consumers. Hence, these taxes may be criticized in much the same terms as those applied to excise taxes above, except that the fiscal adequacy of customs duties is more seriously open to question than that of excise taxes.

The Federal Tax System as a Whole. In some respects, it is difficult to summarize our study of the federal tax system. Some of its taxes are direct, others are indirect. Some are convenient and economical to collect, others are not. Some are progressive, others regressive. Certain generalizations may be made, however. The federal tax system as a whole ordinarily meets fairly well the test of fiscal adequacy. In depression or war years, of course, it sometimes fails to provide enough revenue to cover all expenditures which must be made, but it is difficult to imagine a tax system that would be perfectly elastic and adequate for all emergencies. In 1946, about 73 per cent of the total federal revenue was derived from taxes which were progressive, at least nominally. In the case of taxes on corporate incomes, however, there is no certainty that the progressive rates actually levied are converted into progressive rates on the incomes of the individual owners of corporations.

The federal tax system as it was at the end of 1945 may have been necessary or even desirable for purposes of war finance, but it would be open to serious objection in time of peace because of its probable effects

in restricting production and employment, and discouraging business ownership and the founding of new enterprises. The heavy excess profits taxes used in 1945 would have no place in a peacetime tax system, for they would deprive many firms of any incentive to do more business than had been done in the base period, and would place grave difficulties in the way of new firms which needed to increase their capital out of earnings. The excess profits taxes have been repealed, of course, but a number of further changes in the federal tax system would be desirable.

Proposed Changes in Federal Taxation. Excise and other non-progressive taxes may be necessary in years of unusually heavy expenditures, but the goal should be to collect from income and estate taxes as large a part as possible of the total federal revenue. In particular, the personal income tax should be the mainstay of federal taxation. For this purpose, it would be necessary that exemptions in connection with this tax be kept at a low level, and that surtax rates progress sharply in the middle income brackets, or up to the level of (say) \$20,000.

However, heavy dependence on income taxes in general would seem to require a number of changes in the application of the taxes. For one thing, complete offsets for losses against taxable income earned in earlier or later periods would be desirable in order to reduce as much as possible the deterrent effects of income taxes on investment. If income is taxed without offsets for losses being provided, risky investments are discriminated against, since they involve the greatest possibility of losses. A carry-forward period of six years and a carry-back period of two years would probably be adequate to provide complete offsets for losses for well-established firms and well-to-do individuals, but these provisions would not help unsuccessful new corporations which do not have any net taxable income in other periods against which losses could be offset. In such cases it might be desirable to have the federal Treasury pay the firms a fraction of their losses equal to the fraction which the Treasury would have taken out of net taxable incomes of the same size. That is, if a new firm would have to pay a tax of 20 per cent on a net income of \$20,000, then the Treasury would pay the firm 20 per cent on a net loss of \$20,000.

In the second place, the application of progressive rates of taxation discriminates against incomes which are irregular through time. Thus, an individual who had an income of \$50,000 in one year and then \$12,500 a year for the next four years would pay a much higher total tax over the five-year period than another individual with the same total income over the period who received \$20,000 each year. Considerations of equity would seem to require that the two individuals pay the same tax on the same total income over the given period. Relief could be given by allowing the taxpayer to recompute his tax liability on an average income basis at five-year intervals and secure a refund of the difference between this tax liability and the amounts of taxes actually paid. A similar averag-

ing principle might also be applied to exemptions, and to capital gains and losses. In the latter case, the averaging period should be equal to the number of years for which an asset was held prior to the realization of a gain or loss, and such averaged gains or losses could then be figured in fairly with ordinary income.

Third, small new firms are subjected to great difficulties when they are taxed at the same rates as large, well-established firms. Our tax laws should not discriminate against the former firms; on the contrary, quite possibly they should discriminate in their favor. It might be well to exempt corporate incomes up to \$25,000 from the corporation income tax, and possibly to treat small corporations as partnerships. Research expenditures should be defined liberally and treated as current expenses which could be used to offset current income. Along the same line, in the case of the personal income tax it would be desirable to employ differential tax rates, so that personal incomes derived from self-employment (operating enterprises) and from corporate dividends would be taxed less heavily than personal incomes derived from salaries or interest. And personal incomes invested in new plant and equipment, or in corporate stocks for the same purpose, might well be taxed at less than the regular surtax rates. The purpose of all these provisions would be to stimulate production, employment, business ownership, and particularly the founding and growth of new enterprises, while maintaining a high level of revenue for the federal government.

Fourth, the tax exemption privilege now accorded to interest on the bonds issued by state and local governments should be eliminated. At present, as has been said, "This exemption privilege is not only highly inequitable and costly to the Treasury but acts as a major deterrent to risk-taking. A wealthy taxpayer who is subject to a surtax rate of 65 per cent, for instance, will find investment in a tax-exempt 4 per cent bond equivalent to investment in a taxable venture paying 12 per cent before tax, quite apart from avoiding the risks of the higher yield security. The tax advantage of gilt-edged investment, and the relative disadvantage of risk investment, moreover, are greater the higher the surtax bracket. Risk investment, therefore, is deterred most at the very source from which venture capital should be expected to flow."³ This situation should be corrected immediately.

Fifth, community-property provisions and the option which husbands and wives now have of filing separate or joint returns should also be eliminated. In certain states, the income received by husband and wife is now regarded as community property. Each may lay claim to half the income and file a separate return, which results in a great saving in terms of income taxes. In the other states, husbands and wives may claim

³ Board of Governors of the Federal Reserve System, *Public Finance and Full Employment*, Postwar Economic Studies No. 3, Washington, 1945, p. 37.

only the income which they receive individually, but they may file either joint or separate returns so as to minimize their total income tax.

Finally, there is need for integration of the personal and corporate income taxes in order to avoid some of the difficulties mentioned earlier in this chapter. One proposal would abolish the tax on corporation incomes and bring these incomes under the personal income tax. This might be done by requiring every individual to declare annually, as part of his personal income, his proportionate share in the earnings of any corporations in which he was a stockholder, regardless of whether these earnings were or were not distributed to the stockholders. This would do away with double taxation as between corporate and personal income taxes, and would eliminate the troublesome question of whether a corporation has ability to pay taxes apart from the ability of its individual stockholders. If this proposal were considered too formidable from an administrative point of view, corporations might be allowed to deduct from their own taxable incomes all or part of the cash (or stock) dividends paid to the stockholders; or corporations might be taxed in full on their incomes, the individual stockholders being permitted to credit the taxes paid for them by the corporations against their personal income tax liabilities.

Apart from the changes which have been suggested in connection with income taxation, an attempt should be made to strengthen the estate tax. The estate and gift taxes should be coordinated more closely in order to prevent evasion of the estate tax through gifts in anticipation of death. The means of escape now provided by the tax-free transfer of life estates should be eliminated. The exemption might well be reduced somewhat from its present level of \$60,000 and the rates of taxation may need some revision.

STATE REVENUES

The state governments of the United States are like the federal government in being dependent primarily on taxation for their income. However, they derive a part of their income from such non-tax sources as special assessments; fines, forfeits, and escheats; subventions, donations, and assessments; earnings of general departments; and earnings of public service enterprises. In Table 53 we present sources of state tax revenue in 1945.

State Income Taxation. Because of the great variations in tax laws from state to state and the limitations of space, it will not be possible to discuss in detail the tax provisions of the several states. It is necessary to limit the present discussion to general considerations with respect to the tax systems of the state governments and to the incidence of such taxes as are not already familiar from our previous analysis. Income taxes

are used in about three-fourths of the states, and in most cases are not very different, in their general approach, from the federal taxes on income. Income taxes are much less important for state governments than for the federal government; nevertheless they produced 19 per cent of state tax revenues in 1945. A few states have recently adopted income taxes which provide that their citizens must pay a flat rate of 1 or 2 per cent on their entire incomes, or on incomes above a certain very moderate exemption. Such taxes are, of course, proportional in character and do not correspond to the principle of ability to pay, although they may be productive of large revenue.

TABLE 53. SOURCES OF STATE TAX REVENUE, 1945
(Source: *The Economic Almanac for 1946-47*, p. 302)

Source of Revenue	Amount Received (in millions)	Per Cent of Total Tax Revenue
Income taxes	\$ 809.9	19.0
Property taxes	228.6	5.4
Inheritance, estate, and gift taxes	131.9	3.1
Gasoline and motor fuel taxes	701.1	16.5
Sales and use taxes	1571.2	36.9
Business licenses	263.0	6.2
Motor vehicle licenses	406.4	9.5
All other taxes	143.2	3.4
Total tax revenue	\$4255.3	100.0

General Property and Inheritance Taxes. The general property tax is important and worthy of examination, but it will be treated in connection with the tax systems of local governments, where it assumes even greater importance than in state taxation. Inheritance and gift taxes are used in 47 states, and yielded 3.1 per cent of state tax revenues in 1945. In most states, the inheritance tax is levied upon the several shares of an estate, rather than upon an estate as a whole—which means that it is truly an inheritance tax, and not an estate tax. State inheritance taxes are often progressive in two directions. That is, the rate grows larger the greater the share involved and the more distant the relationship, if any, between the decedent and the heir. The incidence of the state inheritance taxes is similar to that of the federal estate tax.

Sales and Use Taxes. The sales tax has come into prominence, in recent years, as a source of revenue for state governments. The tax has been applied in most states, is based on retail sales, and usually runs from 1 to 3 per cent on the value of the articles sold. According to the data in Table 53, sales taxes and use taxes furnished 36.9 per cent of

state tax revenues in 1945. Use taxes are usually intended to prevent people from escaping sales taxes—just as gift taxes are designed to keep them from avoiding inheritance taxes—and have been adopted by most states which use sales taxes. Use taxes are levied as a charge for the privilege of storing, using, or consuming within a state any goods which have been purchased outside the state. A person who lives in a state that has a sales tax, and who purchases goods outside the state to avoid the sales tax, becomes subject to the use tax when he brings the merchandise home. The receipts credited to sales and use taxes in Table 53 apparently include the revenues received from state excises on liquors, tobacco, and other commodities, as well as those from sales and use taxes proper.

The sales tax—and this is true also of the use tax—is decidedly defective from the point of view of our principles of taxation; it is regressive in operation and does not conform to the principle of ability to pay. People with large incomes spend a smaller percentage of their incomes on the retail purchases subject to the tax than do poorer people, so that the tax takes a higher percentage of small than of large incomes. The sales tax is not so well received by the payers as some regressive taxes, for most of the sales tax laws require separate charging of the tax to retail purchasers, in order to promote the shifting of the tax to consumers and to make them conscious of the fact that they are paying it. The sales tax is costly to collect and not at all simple to administer.

Motor Vehicle and Gasoline Taxes and Fees. Most if not all states require the payment of a registration fee annually on all motor vehicles, and many collect additional sums for operators' licenses. Some have even imposed excise taxes on the purchase of new cars. Such excise taxes are paid once and for all, but the owners' and operators' fees are collected repeatedly. While these fees are not taxes in the strict sense of the term, they have about the same effect as taxes on consumption or on the operation of businesses which will shift the taxes to the consumers. The same is true of taxes on gasoline and other motor fuel. All of these taxes, therefore, tend to be regressive in operation. The taxes and fees in connection with the operation of motor vehicles produced 26 per cent of the total state revenues in 1945.

Other Items. Most states require individuals to have licenses in order to carry on certain businesses and to follow certain professions, and the states derive a considerable income from the fees charged for these licenses. For example, one must obtain a license and pay a fee to sell cigarettes, to operate a tavern, or to work as a barber. These fees become part of the cost of doing business and tend to be passed on to the final consumers through the prices of commodities and services. They produced 6.2 per cent of the total state revenues in 1945. In addition to the items listed in Table 53, payroll taxes in connection with unemployment compensation brought in large amounts of money for the states in 1945. How-

ever, these funds must be turned over to reserve accounts for paying unemployment benefits and should not be counted in general revenues available for ordinary expenditures. The state payroll taxes are similar to those levied by the federal government and tend to have the same incidence.

State Tax Systems as a Whole. In 1945, as in other years, by far the greater part of state revenues was derived from taxes which do not conform to the principle of ability to pay. This means that the revenue systems of the states are highly regressive in operation and that the burden of state taxation falls relatively more heavily upon the poor than upon the rich. On the other hand, the fiscal adequacy of state revenue systems has improved in recent years. State revenues and expenditures have both been increasing, but the revenues have increased faster than the expenditures, and a number of states have accumulated considerable surpluses.

LOCAL GOVERNMENT REVENUES

We shall use figures for cities with a population of 25,000 or over, in describing the sources of revenue for local governments. We see from Table 54 that these cities in 1944 received 74 per cent of their revenues

TABLE 54. SOURCES OF REVENUE OF CITIES WITH POPULATION OVER 25,000, 1944
(Source: *The Economic Almanac for 1946-47*, p. 315)

Source of Revenue	Amount Received (in millions)	Per Cent of Total Revenue
Property taxes	\$1725.5	64.8
Other taxes	245.8	9.2
Aid from other governmental units	454.2	17.0
Contributions from public service enterprises	49.0	1.8
Other non-tax revenue	189.6	7.2
Total revenue	\$2664.1	100.0

from taxation, largely from property taxes, which produced 64.8 per cent of total revenues and 87.5 per cent of tax revenues. The revenue from property taxes, in turn, was produced largely by the general property tax, which is the only important type of tax that we have not yet discussed. The "other taxes" levied by city governments include a wide variety of items, among them local income and sales taxes. The non-tax revenue includes, besides aid from other governments and contributions from public service enterprises, such things as fines, forfeits, and penalties; interest, rents, and royalties; donations and contributions; unclaimed money; special assessments; and service charges.

The General Property Tax. Since the tax revenues of city governments are derived in large measure from the general property tax, it will be well to analyze this tax carefully. The general property tax is a tax on property considered as a homogeneous whole, and is sometimes called "the uniform rule" of taxation. This means that the rate of the tax is to be uniform throughout the taxing district and for any amount of property. The tax is based upon the valuation or assessment of property in terms of money. These valuations are estimated by assessors at specified times, and the tax is applied at a certain rate, ordinarily upon the total valuation of the property of the taxpayer in question. Boards of Review are often created for the purpose of correcting inequalities and obtaining a uniform basis of assessment.

Defects of the General Property Tax. The general property tax is based upon the assumption that ability to pay is adequately represented by the ownership of "general property." The defects of the tax are numerous. In the first place, it is based on a mistaken notion as to the nature of property. Property is an institution which guarantees to the individual the right to use and control, to receive benefit from the ownership of, to exclude others from the use of, and to pass on to others at the time of death or before, whatever economic goods he may acquire. What is called "property" under this tax is in reality made up of two classes of things—wealth and claims upon wealth. Now when certain items of wealth and claims on these same items are both regarded as general property subject to tax, it is clear that double taxation arises. Thus, the corporation is taxed upon certain items of wealth, such as buildings and machinery, and the stockholder is taxed upon his shares of stock, which are the claim upon these articles of wealth. This is double taxation in the worst sense because it is largely if not entirely unintentional, and because an item of wealth and a claim upon that wealth are both taxed at the full rate charged other items of wealth which are not represented by similar claims. In the second place, it is assumed, at least by inference, that nothing other than "property" represents ability to pay taxes. This is clearly untrue at present, for many persons have very large incomes derived from personal services, but possess little wealth that is reached by the general property tax.

A third and important defect of the general property tax is that it is grossly inequitable. The assessment is made by assessors who are ordinarily dependent for their positions upon some of the people whose property is to be assessed. They are for the most part untrained and inexperienced, and do their work in a relatively short time. The result is inequitable valuation and taxation. Much intangible property (that is, claims upon wealth) escapes assessment altogether, while real and tangible personal property is assessed in a most discriminatory fashion. As expenditures have increased on the part of the governmental units dependent upon this tax,

it has been found necessary to increase the rate at which the tax is applied. This has given to the owners of intangibles an increased incentive to evade assessment, which means a smaller amount of property of this kind assessed and a still higher rate, which in turn stimulates further evasion, and so on. Evasion of the tax is easy on the part of owners of intangibles, because their correct assessment depends so largely upon the cooperation of the taxpayer himself.

Though in theory the tax is based upon proportion (that is, the same rate being intended to apply regardless of the amount of property an individual has), it seems altogether fair to say that the tax has been regressive in its operation. The owners of great wealth are able to consolidate much of their holdings in forms which escape the tax, while it is well known that real and tangible personal property is progressively underassessed. Thus, the rate actually paid upon "general property" tends to be lower, the greater the amount of property possessed by the individual. In addition, it becomes more and more difficult as time goes on to insure the fiscal adequacy of the tax, for it is not easy to adapt it to increasing fiscal needs. It is decidedly inelastic.

Classified Property Taxes. In some states and local governmental units attempts are made to avoid the difficulties arising under the general property tax by adopting what are called "classified property taxes." As the name suggests, the various items of wealth and claims upon wealth are divided into classes for purposes of taxation, with a different rate of taxation for each class. The purpose is to obtain a more equitable distribution of the burden of taxation and, of course, to make possible the more efficient administration of the taxation of property. The tax rate applied in each class is high or low, depending chiefly upon whether the items in the group can easily evade assessment and taxation. The lowest rate is accordingly applied to intangible personal property for the above reason and in order to avoid any serious double taxation. Tangible personal property is less mobile than intangible, but there are nevertheless means of evasion open for such items of wealth. Consequently, a moderate rate is usually applied in this group. Least mobile and least likely to evade taxation is real property, and the highest rate of all is imposed upon wealth of this type.

Improvement of the General Property Tax. Many suggestions might be made for improving the general property tax. The assessors should be appointed rather than elected, and the county should be the unit of assessment, with the whole procedure under state supervision and control. The collection of the tax should be improved, with delay allowances, and the remission or reduction of penalties, eliminated. The interest penalty for delay in payment should be two or three times the current rate on real estate loans, in order to prevent borrowing from the government through non-payment of taxes. No further exemptions from the tax should

be granted for the purpose of attracting business enterprises to a community, and a reassessment of "properties" should be made oftener than is at present the case. Constitutional limits on tax rates might well be repealed, and the tax should be used only to supply revenue for the local units of government.⁴

The Incidence of the General Property Tax. It is not feasible to discuss the incidence of this tax as a whole. It must be considered as it falls upon owners of different kinds of wealth. So far as the general property tax is a tax on land, the tendency is strong for the burden to rest finally upon the owner of the land, regardless of whether he pays the tax originally. Land is not a commodity produced at the will of man, but is fixed and non-extensible in amount, for all practical purposes. The rent of land, and consequently its value, are determined by the conditions of demand for and supply of land. There is nothing about a tax on land which will make its user willing to pay a higher rent for it, nor will its supply be affected in any way by such a tax as is ordinarily applied. Therefore the tendency is for the owner of land to bear the burden of any tax placed on it. It should be remembered that this is the case stated in its bolder terms. Many qualifications and variations of assumptions have been made in the past in presenting the theory of the incidence of the tax on land, but in the majority of the cases which are of practical importance the tendency as stated above is clearly observable.

The incidence of the tax tends to be quite different when it falls on buildings, rather than on land itself. A tax on buildings tends to fall upon the tenant rather than on the owner, unless these two happen to be the same person. Buildings are simply one form of the investment of capital, and if a tax is imposed which temporarily falls upon the owners and makes the return from this investment smaller than that which can be obtained in other lines, the tax tends to be shifted. The process of shifting is a long-run process, and comes about through an exodus of capital from the taxed form of investment, which enables the capital that remains in this line to receive as high a return as it received before the imposition of the tax.

A tax on buildings, then, seems to be merely one case of the taxation of capital. So far as a tax falls upon some lines of investment and not upon others, or upon some more heavily than upon others, there is a tendency for it to be shifted through the process outlined in the preceding paragraph. So far as a tax affects all capital alike, its shifting or non-shifting depends upon whether, in the long run, the tax is sufficiently high to operate as a check upon saving and the accumulation of capital. To the extent to which the general property tax is imposed on articles of wealth which will be used not as capital in further production but merely for

⁴ These recommendations are from *Facing the Tax Problem*, New York, Twentieth Century Fund, 1937.

personal consumption, the prospect of shifting the tax is practically nil, because such articles do not ordinarily enter into later price transactions.

Conclusion. Since about three-fourths of the total federal revenues are received from taxes which are at least nominally progressive, and since federal revenues are several times as large as those of state and local governments combined, it is possible to say at present that taxation in the United States is on the whole progressive in operation. In other words, the larger part of our total tax revenue is received from taxes which take a larger percentage of large than of small incomes. This is a desirable situation and it should be maintained.

It appears that federal revenues will continue to be several times as large as those of state and local governments combined for some years to come. Thus, if the tax system as a whole is to be kept on a progressive basis, any reductions in federal taxation which become possible should be accomplished largely through the reduction or elimination of excise and other unprogressive taxes. The changes in excise taxation should be accompanied by commitments, on the part of the industries affected, that the savings which result will be passed on to the consumers in the form of lower prices. On the other hand, exemptions under the personal income tax of the federal government should be kept low so that almost all income receivers will make some contribution, however small, to the direct support of the government, and will be aware that they are making such contributions. This may aid in bringing about a public understanding of the relationship between the performance of functions by the government and the necessity of contributing to the support of the government, and thus help to correct the unwholesome, careless attitude toward public funds which has existed in the past.

It is probably too much to expect that regressive taxes can be entirely abandoned, especially since some of them are rather satisfactory from an administrative point of view because they are certain, convenient, and economical in collection. And the use of these taxes may have to be extended at times. When more revenue is needed during a depression—a time when large profits are only a memory and everyone's income is greatly reduced—it may be necessary to extend the use of excise, sales, and other taxes as a temporary expedient. Again, if there is need to finance an enormously expensive war program, it may be necessary to extend the regressive taxes as well as increase rates and lower exemptions in connection with progressive taxes. But such extensions of regressive taxes should be clearly recognized as emergency measures, and not accepted as permanent changes in our system of taxation.

Finally, there should be a closer integration between the tax system of the federal government and the systems of state and local governments. Some difficulties are bound to arise when all the various governmental units levy taxes on incomes, inheritances, and other sources of revenue.

On the other hand, it would not be desirable to make the state and local governments depend entirely on taxes which the federal government did not care to levy. In particular, state and local governments should not increase the use of regressive taxes as these taxes are reduced or discarded by the federal government. In view of these considerations, it might be desirable to eliminate the state and local tax systems and leave only that of the federal government. In this way all taxes would be collected by the federal government and the revenue divided among the various governmental units. Competitive taxation of the same sources of revenue by various governmental units would thus be eliminated, and it would be more easily possible to keep the tax system as a whole on a progressive basis, since the federal government would know that its actions would not be offset or canceled by those of state and local governments.

1. What is the nature of taxation, and how is taxation related to public expenditures?
2. What is the problem of taxation?
3. What is the first test of a sound tax system?
4. If a tax system meets this test, what is the next most important consideration? Why?
5. What are the other requisites of a sound tax system?
6. Why is the principle of ability to pay considered superior to other principles as a basis for distributing the burden of taxation?
7. What is at present the most generally accepted indicator of ability to pay? Why?
8. Does taxation according to ability to pay point to regressive, proportional, or progressive taxation? Explain.
9. Distinguish between direct and indirect taxes.
10. List the principal sources of federal revenue.
11. What are the principal characteristics of the personal income tax as applied by the federal government?
12. Comment on the merits and defects of our federal personal income tax.
13. Is the personal income tax a direct or indirect tax? Why?
14. Describe the federal corporate income tax. Why do some people object to this tax? Explain.
15. Does this tax lead to double taxation? Why?
16. Is double taxation always objectionable? Why?
17. Explain how the capital stock tax and the declared value excess profits tax work in combination.
18. Compare the declared value excess profits tax with the excess profits tax of 1940.
19. How does the federal government tax estates? Explain.
20. State and answer the chief objections which are raised against the federal estate tax.
21. What are excise taxes and who bears their burden? Explain.

22. Are excise taxes desirable in themselves? Why?
23. Comment on the importance and desirability of customs duties in our federal tax system.
24. Make several suggestions for the improvement of the federal tax system.
25. Describe the principal sources of state tax revenue and criticize state tax systems as a whole.
26. What is the sales tax and how is it used? Is it a desirable tax? Explain.
27. What are the principal sources of city revenues?
28. In what respects is the general property tax defective?
29. What steps may be taken to avoid the difficulties which have been experienced with the general property tax?
30. What is the incidence of the general property tax? Explain.
31. How does the combined tax system of federal, state, and local governments measure up to the tests of a sound system of taxation? Explain.

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Agriculture

THE WIDE PUBLICITY GIVEN THE AGRICULTURAL PROBLEM IN THE TWO DECADES before World War II made most Americans aware of its existence, but there were many who did not take this problem seriously. They regarded our farmers as no worse off than other enterprisers, but a good deal noisier about such troubles as they had. It is likely that this attitude resulted from a lack of understanding of the situation. It is difficult to believe that anyone thoroughly familiar with the importance of American agriculture, and the nature of its difficulties, could have failed to see the seriousness of this problem.

The Importance of American Agriculture. Agriculture is important as a source of both food and certain raw materials used in manufacturing industries. The farm population in 1945 was 25,190,000, or 18.1 per cent of our estimated total population. There were 6,097,000 farms in 1940, and the total value of farm land and buildings amounted to \$50,295,000,000 in 1945. The gainfully employed in agriculture in 1945 numbered 9,833,000 persons, or 15.9 per cent of the total for the country. The number of gainfully employed in agriculture was greater than in any other branch of economic activity except manufacturing, in which the total was 13,288,000, or about 35 per cent greater than in agriculture.¹

Clearly, an industry as extensive as agriculture is of great importance to other industries and to the country as a whole, and not merely to those who devote their energies to it. It is difficult for manufacturing industries or other economic activities to prosper when the farmers' income is greatly reduced, or for the nation as a whole to achieve a high level of economic welfare with American agriculture on the verge of economic ruin. And this was the condition that prevailed in our farming industry in the great depression following 1929.

THE CAUSES OF THE FARM PROBLEM

The main problem of agriculture, or at least the one which is best known, is the unfavorable price-cost relationship for major farm products, and the unsatisfactory general levels of farm income which prevailed for

¹ These data are from *The Economic Almanac for 1946-47*, New York, National Industrial Conference Board, 1946, pp. 110, 111, 131, 153.

many years after World War I. But the farm problem is in reality a group of closely related problems, which include soil erosion, dust and flood control, the migration of farm workers, farm debts, farm credit, tax delinquency, share-cropping, farm tenancy, and many other matters. Our discussion will deal for the most part with the main problem of price-cost relationships.

The Question of Overproduction. The main farm problem was not wholly a product of the post-1929 depression. It had existed in more or less serious form at least since the end of World War I in 1918, and was merely intensified by the depression. If a large number of individuals selected at random were asked to name in a word the cause of the farm problem, it is probable that the majority would blame *overproduction*. Let us see what this term means, as applied to the agricultural problem. It is practically certain that this country has not in recent years had an overproduction of farm products, in the sense of more farm goods than our people would have willingly used if they could have obtained them without payment. And it seems equally likely that our total farm output of recent years could have found purchasers at some price or other.

Whatever overproduction has occurred has been overproduction in the sense that the quantities of farm goods that have been turned out have not been salable at prices which would cover their costs of production, in the economic sense. As a consequence, large surpluses of some kinds of farm products accumulated, and in the matter of real income the farmers steadily lost out, as compared with other types of American producers. Many factors contributed to bring about this unfortunate and inequitable situation.

The War Demand for Farm Products. The tremendous foreign demand for American farm products, during and immediately after World War I, gave a great stimulus to agricultural production in this country. The countries at war had to take many men, and in some cases much land, out of agricultural production, with the result that the output of farm products, especially in Europe, fell off greatly. The countries affected were anxious to buy at high and even exorbitant prices all the farm products that we of the United States would send them. Hence, the war period was one of rapid increase in the foreign demand for our agricultural produce.

Supply Changes. On the supply side, important changes took place at about the same time. In the first place, the mechanization of agriculture developed rapidly. The tractor came into more general use on the farm during this period, and made possible the development and utilization of larger, more complicated, and more efficient farming implements of other types than had previously been used. Again, methods of cultivation were improved under the guidance of the United States Department of Agriculture. Our farmers learned much about the control of insect pests

and other crop parasites, the benefits of seed selection and proper fertilization, and the most improved methods of animal breeding and feeding. Finally, as a result of the favorable price situation, the improved methods of cultivation, and the mechanization of the farms, still other changes in agriculture took place. It now became feasible to bring under cultivation land areas which had been too poor to use under former conditions. Farmers were encouraged to specialize in raising money crops for the market, instead of continuing to engage in diversified farming. The increasing use of mechanical power, both on and off the farm, reduced the amount of land needed to produce feed crops for animals, and the land released in this way was often devoted to producing more of the great staple money crops.

Wartime Production and Income. Under the influence of favorable demand and supply conditions, agricultural production as a whole increased by about 10 per cent between 1915 and 1920,² the acreage under cultivation expanded slightly, and exports of agricultural products grew. Net income from agriculture increased from \$5,921,000,000 in 1915 to \$12,699,000,000 in 1919.³ This large increase in income would not have meant much to the farmers if the prices of the products they bought had increased as fast as the prices they received for their own products; but this was not the case. If the years 1909 to 1914 are taken as the base period for index numbers of both prices received by and prices paid by farmers, we find that prices received by farmers were 204 in 1918, while prices paid by them were 173. In 1919, these two index numbers were 215 and 198, respectively.⁴ Therefore, the farm income of this country increased both absolutely and in relative purchasing power during the war and early post-war years.

Post-War Conditions. But these favorable conditions for our agriculture did not last long. After the close of World War I, agricultural production picked up in Europe so that within a few years many of the European countries had reached the pre-war level in this respect. As a result, their demand for American farm products declined. Moreover, many of the less highly industrialized parts of the world were able to increase their agricultural production substantially through the use of improved methods and machinery; and they began to compete strenuously for the foreign markets which Americans had been supplying with farm products. Some European countries were not content to have their agricultural production merely reach pre-war levels. Under the influence of programs of extreme nationalism, many attempted to become self-sufficient, or largely so, with respect to important foods and raw materials

² Board of Governors of the Federal Reserve System, *Agricultural Adjustment and Income*, Postwar Economic Studies No. 2, Washington, 1945, p. 2.

³ National Industrial Conference Board, *The Economic Almanac for 1945-46*, p. 168.

⁴ *Ibid.*, p. 170.

which they had formerly imported in large quantities. This they did despite the fact that their land areas were often poorly adapted to raising these goods, so that the costs of producing them at home were excessive.

The American policy of discouraging imports, as developed in our high protective tariff laws after the war, hindered our farmers in their efforts to retain export markets. The eventual and inevitable curtailment of the large loans Americans had been granting abroad for the purpose of financing exports increased the difficulty of selling farm products to foreigners. From the domestic point of view it may be true, as is often claimed, that changes in the diet of the American people had a depressing influence on the market for farm products, and the adoption of prohibition may have had a similar effect.

In the face of unfavorable market conditions at home and abroad, agricultural production in the United States increased another 10 per cent during the 1920's. The prices of agricultural products, which had dropped 41 per cent from their wartime peaks by 1921, remained low during the 1920's, whereas prices paid by farmers were much better maintained.⁵ By 1929, the index of prices received by farmers stood at 149 on the basis of 1909-14 prices as 100, while the index of prices paid by farmers was at 167.⁶ Net income from agriculture, which had reached a peak of \$12,699,000,000 in 1919, varied between 7 and 9 billion dollars in the 1920's and was \$8,720,000,000 in 1929.⁷ Thus agriculture was relatively depressed during a period in which industry was experiencing a boom of unprecedented proportions.

Agriculture in the Great Depression. With the coming of the great depression after 1929, the bottom really fell out of the market for agricultural products, and exports declined drastically. On the other hand, agricultural production was well maintained during the depression and declined only to 117 (1909-14=100) in 1932, the worst year of the depression.⁸ The net income from agriculture fell from \$8,720,000,000 in 1929 to \$3,040,000,000 in 1932.⁹ The effects of the decline in farm income were the more severe because the prices received by farmers for their products fell faster and further than the prices paid by farmers for the goods they bought. The index of prices received by farmers fell from 149 in 1929 to 90 in 1931 and 68 in 1932, while the index of prices paid by farmers fell only from 167 in 1929 to 142 in 1931 and 124 in 1932.¹⁰ The *ratio* between these index numbers in 1932 was about 55. This means

⁵ Board of Governors of the Federal Reserve System, *Agricultural Adjustment and Income*, pp. 3, 4.

⁶ National Industrial Conference Board, *The Economic Almanac for 1945-46*, p. 170.

⁷ *Ibid.*, p. 168.

⁸ Board of Governors of the Federal Reserve System, *Agricultural Adjustment and Income*, p. 3.

⁹ National Industrial Conference Board, *The Economic Almanac for 1945-46*, p. 168.

¹⁰ *Ibid.*, p. 170.

that in that year the farmers, by giving up products worth \$1.00 in terms of the base period, could obtain other products worth 55 cents in terms of the same period.

Many of our manufacturing industries, by virtue of their monopolistic or monopoloid situations, were able to keep prices relatively stable during the depression and take their losses in the form of idle plant and equipment rather than by selling their products at low prices. For example, from 1929 to the spring of 1933, the output of farm implements dropped 80 per cent, of motor vehicles 80 per cent, of cement 65 per cent, of iron and steel 83 per cent, and of automobile tires 70 per cent. However, the prices of farm implements in this period declined only 6 per cent, of automobiles 16 per cent, of cement 18 per cent, of iron and steel 20 per cent, and of automobile tires 33 per cent.¹¹ If, in the face of a declining national income, some prices do not fall, the effect is to depress other, competitive prices to a greater extent than would otherwise be necessary. The farm industry, being operated by millions of independent enterprisers, was unable to protect itself in this situation, and the fall in farm prices was disastrous.

The Insensitiveness of Farming. Two important questions should be raised at this point. The first of these is, Why did not the farm industry, like the manufacturing industries, recognize the existence of unfavorable demand conditions and reduce output all along the line? And the second question is, Would not the farm problem have solved itself eventually through the operation of natural economic forces, such as the business failure of increasing numbers of farmers and the gradual reduction of the acreage in cultivation and, hence, in the size of crops?

In answer to these questions, it may be said that farming is apparently less sensitive than most industries to changes in demand conditions and the prices of its products. When manufacturers can no longer make ends meet, they fail and their output is withdrawn from the market. Or, in some instances, manufacturing concerns, before reaching the failure stage, decide to cooperate with one another in the reduction of output and maintenance of prices. The farmer seldom fails. Those who have lent him money are usually lenient in allowing him to continue in business, even though he defaults on his obligations. Even when he loses his farm through mortgage foreclosure, he is often permitted to remain on the land and cultivate it. Moreover, it is practically impossible for the many independent growers of a crop to cooperate with one another voluntarily to restrict output and maintain prices as manufacturers are given to doing.

So long as the farmer can stay on the land, he is likely to keep on producing to the utmost of his ability, for his total costs are made up largely of fixed costs. Payments for interest, rent, and taxes cannot be

¹¹ United States Department of Agriculture, *Yearbook of Agriculture, 1935*, Washington, Government Printing Office, 1935, p. 5.

reduced readily, and the farmer cannot gain by laying off his own labor or that of his immediate family. Payments for hired labor, seed, fertilizer, and power are about the only variable costs of the farmer, and these are small compared with total costs. When the prices of his products fall, he can save comparatively little by cutting down output. Indeed, falling prices for farm products, within limits, may result in increased rather than decreased farm production, since it takes more bushels of wheat or pounds of cotton to pay a given amount in taxes or interest when farm prices are low than when they are high.

The burden of fixed costs bore heavily on the farmer after World War I. Agriculture was so prosperous during and immediately following the war that farming land increased rapidly in value, and many farms changed hands at greatly inflated prices. The mortgages which usually accompanied such changes in ownership called for large interest payments and these became difficult to meet in later years. The total amount of interest payable by farmers in 1930, 1931, and 1932, was 96, 92, and 87 per cent, respectively, of the total payable by them in 1929. Similarly, the assessments on farming land for tax purposes increased during and following the war, and it was difficult, of course, to secure later reductions in these assessments. The taxes payable by American farmers in 1930, 1931, and 1932 were 100, 92, and 79 per cent, respectively, of their 1929 taxes.¹²

Thus, in the great depression following 1929, the farmers, with their fairly stable money costs and sharply reduced incomes, were in very serious straits. Thousands lost their farms through foreclosure, and the situation finally became so bad that groups of farmers sometimes banded together to prevent foreclosures and sheriff's sales, even by violence, if necessary. There were also farmers' strikes and riots, in which groups of farmers attempted to destroy farm produce on its way to the market, or otherwise to prevent the marketing of farm products until prices should improve. In some cases, crops were left to rot in the fields, or were destroyed, because they could not be sold at prices sufficiently high to cover even the necessary expenses of harvesting them. It may be argued, some years after the event, that these conditions in agriculture would eventually have corrected themselves through the action of natural economic forces. A solution of the farm problem might or might not have come about in this way. Given the best of good luck, solving the farmers' difficulties without governmental assistance would have been a long and painful process. At any rate, attempts had previously been made to give assistance to the farmers and, since the Roosevelt administration undertook to adopt a general recovery program, it was probably necessary both economically and politically to do something about the agricultural problem.

¹² *Statistical Abstract of the United States*, 1935, p. 590.

Soil Erosion. The main farm problem, as we have already described it, was bad enough, but in later years our farmers have been menaced by a serious increase in soil erosion. While soil erosion is not of recent origin, it has only lately come to command great public attention. The extension of cultivation to new areas formerly used for grazing has stripped the soil of natural protective vegetation and, as a result, the uncontrolled forces of wind and water have severely damaged millions of acres of farming land.

In some parts of the country, the land, denuded of trees and other vegetation, is no longer able to hold the moisture which it receives at times. A considerable part of the rainfall runs off the surface, provides but little moisture for plant growth, and carries away with it many tons of fertile soil. But in the past several years soil erosion by wind has perhaps exceeded erosion by water in its destructive effects. Some of the severe dust storms originating in our western states have moved eastward to the Atlantic coast and passed out to sea, bearing with them untold thousands of tons of valuable soil whirling about in the air at a height of two or three miles.

According to government reports, soil erosion has ruined some 50,000,000 acres of farm land and badly damaged 50,000,000 acres more, and much additional land is in serious danger. Erosion dissipates fertile soil through dust storms, piles up soil on the lower slopes, spreads poor subsoil over rich bottom lands, increases the danger of floods, and robs wild animal life of essential food and cover. It also leads to the silting and sedimentation of stream channels, reservoirs, dams, ditches, and harbors, and damages roads, railways, irrigation works, power plants, and public water supplies.¹³

Soil erosion is said to be largely the result of overcropping—an unsound practice which, besides leading to erosion, makes the tillage of the soil more difficult, reduces its content of plant food, and increases the danger of drought. Depletion of the soil has been especially serious in the South, where an average of 80 per cent of the agricultural land has been kept in soil-depleting crops. Such crops as cotton and corn leave the land bare in the winter season and highly subject to erosion under the influence of the moderate climate and heavy rainfall.¹⁴

Methods have been devised for controlling soil erosion, but it is difficult to accomplish much through individual action, since the average farmer lacks the necessary skill, the financial means, and even the incentive to attempt erosion control. Since erosion is caused, or at least facilitated, by unwise use of the soil, it is directly related to the main agricultural problem. It is possible to prevent or greatly reduce soil erosion by putting land into such close-growing crops as alfalfa or blue-

¹³ *Yearbook of Agriculture, 1937, p. 19 et seq.*

¹⁴ *Ibid.*, p. 13.

grass, but it is difficult for farmers to do this when their economic situation is so acute that they need all their land for money crops, such as wheat or cotton. Even the rotation of soil-protecting crops with money crops in alternate years would be helpful in checking soil erosion; but when farmers need, year after year, every penny that they can scrape together, they are likely to plant money crops continuously and let nature take its vengeance. In any case, the individual farmer usually feels that he can do little about soil erosion without the cooperation of other farmers. The methods of handling soil erosion, and the present program of the federal government, will be described later in this chapter.

EARLY ATTEMPTS TO SOLVE THE FARM PROBLEM

We have seen that the farm problem was not caused by the post-1929 depression, but was merely intensified by it. Furthermore, attempts to solve the problem did not wait upon the great depression, but began to appear soon after World War I. An ineffective attempt of this kind took the form of tariff changes in 1922, which placed high rates of duty on imports of agricultural products. The avowed purpose was to protect the domestic market of the American farmer. But he already had such protection, for imports of agricultural products competing with our own had never been heavy. The protection of the home market did our farmers little good, for they were producing agricultural goods in quantities too great to be absorbed by the domestic market at favorable prices, and were rapidly losing their essential export markets. What the farmers really needed was the ability to export. The only tariff change capable of helping the farmer would have been a reduction in the tariff duties on imported manufactures, enabling foreigners to sell their goods to us and thus be in a position to buy our surplus farm produce.

Attempts to Control Surplus Production. Since the farmers were producing more than the domestic market could absorb, and were losing their export markets, attention turned in the next few years to the question of surplus production. Two measures designed to give relief were vetoed by President Coolidge. One of these, the McNary-Haugen Act, provided that a so-called equalization fee or tax should be levied on the output of certain agricultural products, to provide funds to reimburse farmers for the losses incurred in exporting surplus farm products. This plan was expected to decrease the volume of agricultural products sold in the domestic market and maintain domestic prices for these articles well above the foreign level. The second relief measure involved what was called the debenture plan. The idea was to stimulate the exportation of farm products by granting bounties, in the form of debenture certificates, for such exports. The bounties were to equal the difference between the domestic prices of farm products and the prices received in

the foreign market. The certificates were to be accepted by the federal government in payment of import duties, so that there would be a ready market for them. The purpose of this Act was, of course, to reduce the volume of farm products sold in the domestic market and thus raise prices.

The Federal Farm Board. In 1929, the Agricultural Marketing Act was passed by Congress and approved by President Hoover. The Federal Farm Board was set up to carry out the provisions of the Act, and was given one-half billion dollars for use in stabilizing the prices of farm products. While more than one course of action was open to the Board, its chief activity consisted of the purchase of a large part of our surplus output of such products as wheat and cotton, and the storage of these commodities in warehouses. For a time, the Board had some success in producing artificially high prices for these articles, but it failed eventually because it attempted to provide high prices for farm products without putting any effective check upon agricultural production. Naturally, the financially embarrassed farmers, with no restrictions on production, were stimulated by the high prices to increase their output. It seems likely that the equalization fee and debenture plans would, like the Agricultural Marketing Act, have proved defective as solutions of the farm problem.

THE FARM CREDIT POLICIES OF THE ROOSEVELT ADMINISTRATION

The Farm Credit Administration. Several steps were taken by the Roosevelt administration, in its first year in power, to provide debt relief and additional credit facilities for farmers. The Farm Credit Administration was formed in 1933 by Executive Order for the purpose of bringing a number of existing farm credit agencies under one head, and administering the emergency legislation. Operating under the Farm Credit Act, it helped farmers to develop a system of several hundred local production credit associations, to provide farmers with production and marketing credit at low cost. These associations made loans to farmers on crop and chattel security and charged interest rates of approximately 5 per cent, which was some 2 or 3 per cent less than private agencies would have charged for the same type of credit.

Emergency Farm Mortgage Legislation. As has been suggested, the farm mortgage situation during the depression was desperate. In 1932, farm mortgage debts amounted to 8.5 billion dollars, out of a total farm debt of 12 billion dollars. The total debt was more than twice the amount of the gross farm income of 1932, and about equal to that of 1929. Under the Emergency Farm Mortgage Act, the Farm Credit Administration reorganized the Federal Land Bank System and set about refinancing farm mortgage debts. The Act authorized for this purpose the issuance of

two billion dollars' worth of new Federal Farm Loan Bonds, on which the federal government guaranteed interest at the rate of 4 per cent. The proceeds of the bond issue were used to make new loans to farmers or to purchase their mortgages, and some bonds were exchanged directly for mortgages.

The holders of farm mortgages, anxious for settlement after a long period of waiting, were sometimes willing to scale down their claims. Such reductions were obligatory in some cases, for the Land Bank loans, with prior liens, could not exceed 75 per cent of the normal value of the property given as security. In any event, after the mortgages were taken over by the government, the process of refinancing began. These new mortgage obligations of the farmers were to be liquidated over a long period of years, and no payments on the principal had to be made for five years. The interest charge was not to exceed $4\frac{1}{2}$ per cent, as compared with 5 to $6\frac{1}{2}$ per cent formerly paid by farmers.

The Mortgage Moratorium. Under the Frazier-Lemke Act, passed by Congress in 1935, a farmer, faced with foreclosure and unable to get a reduction in his mortgage obligations by direct dealings with his creditors, could apply to the courts to declare him a bankrupt. The court dealing with his case was given the power to stay all legal proceedings against the farmer for a period of three years, during which time he could retain possession and use of the mortgaged property by paying a reasonable rental. At any time during the three years, the court could order an appraisal of the mortgaged property and the farmer could obtain full title to it by paying the appraised value, regardless of the amount of the mortgage obligation. To protect the rights of creditors, it was provided that any creditor who had as security a lien on the property could demand that it be sold at public auction. In this case, the court was required to conduct such a sale after due notice, but the former owner was thereafter to be given ninety days within which he could recover full title to his property by paying the auction price, plus interest at 5 per cent.

The Commodity Credit Corporation. In late 1933, the Commodity Credit Corporation was set up for the purpose of making loans to farmers on their holdings of specified crops. It could lend a farmer 10 cents a pound on his cotton, without liability to him, if he would agree to take part in the 1934 acreage reduction program. A similar offer was made available for corn growers after the corn-hog adjustment program had been set up. That is, in states where corn could be held on the farm under seal, secured by warehouse receipts, the growers could secure a loan of 50 cents a bushel on their holdings, provided they agreed to cooperate in the agricultural adjustment program in the following year. These provisions for loans assured the growers a certain return for their products, and also enabled them to gain by any increases in prices which might result from the operation of the agricultural adjustment program.

These various credit policies were closely tied up with the main agricultural problem. With the pressure of debt obligations reduced, the farmers no longer felt it imperative to keep every possible acre of soil planted to money crops, and were willing to cooperate in a program for controlling agricultural production. Again, the crop loans to farmers made it unnecessary for them to throw their products on the market for whatever they would bring—a course of action which could have depressed the prices of these products still further, or would at least have kept them from rising. The loans made it possible for farmers to withhold a part of their current production from the market, and thus aided the administration in realizing its object of raising the prices of these agricultural products.

THE AGRICULTURAL ADJUSTMENT PROGRAM

Parity Prices. The principal aim of the Roosevelt administration in aiding American farmers was to increase farm incomes and purchasing power by controlling production and raising prices. This objective was sought first through the Agricultural Adjustment Act of 1933, which declared it to be the policy of Congress to establish and maintain a relationship between the production and consumption of farm products which would bring the prices received by farmers to such a level as to give these farm products a purchasing power, in terms of the commodities that farmers buy, equivalent to the purchasing power of the farm products in the "base period." This period was the five years preceding World War I, or from the middle of 1909 to the middle of 1914, except in the case of tobacco. The policy was applied originally to wheat, cotton, field corn, hogs, rice, tobacco, and milk and its products, but in 1934 the list of basic products was amended to include beef and dairy cattle, sugar, peanuts, rye, flax, barley, and grain sorghums. The interests of consumers were to be protected by seeing to it that the adjustment of farm production did not raise the percentage of the consumers' total retail expenditures which farmers received above the percentage they received during the base period.

The Reduction of Output. To achieve the objects of this legislation, the Secretary of Agriculture was empowered to arrange for reductions in the output of basic agricultural commodities by making agreements with farmers to cut down acreage and paying them rentals or benefits in return for such cooperation. The amount of reduction required in the case of specific farm products, and the amount of benefit or rental payments, were to be determined by the Secretary of Agriculture. For example, the Secretary entered into some 1,010,000 contracts with individual cotton growers in connection with the 1934 crop. Every grower who accepted the plan agreed to reduce his acreage planted to cotton by not less than 35

per cent or more than 45 per cent of his average acreage during the preceding five years; and these idle acres he leased to the Secretary of Agriculture. He promised also not to increase his total acreage of *all* crops, after deducting the contracted reduction in cotton acreage; not to increase his acreage in other "basic commodities"; and to use the land rented by the Secretary only for such purposes as might meet with the approval of that official.

In return for his cooperation in the respects outlined above, the cotton grower was to receive from the government a benefit or rental payment which would amount, on the average, to about $4\frac{1}{2}$ cents per pound on the cotton which would have been grown on the land rented to the Secretary, based upon the five-year average production for 1928 to 1932. Since cotton production during this period averaged about 174 pounds an acre, this meant a payment of \$7.85, on the average, per acre of land removed from cultivation. If considered as rent alone, this would have been quite a heavy payment for the land, but it was intended also to compensate cotton growers for labor and capital withheld from production. Similar programs were arranged for other basic commodities.

The Processing Taxes. To secure funds with which to administer the program and pay benefits to farmers, the Secretary was authorized to levy taxes on the processors of the basic farm products. For example, manufacturers of cotton goods were required to pay taxes based on the quantity of raw cotton entering into their products. The processing tax on each product was to equal the difference between its current average farm price and its "fair exchange value"—that is, a price which would give the seller as much purchasing power as its sale would have given during the base period 1909–14. However, if it developed that this rate of tax would not prevent the accumulation of a surplus stock of any commodity, a higher or lower tax rate could be charged.

Marketing Agreements and Licenses. As an alternative form of control, the Secretary was permitted to enter into marketing agreements with processors, associations of producers, and others engaged in handling agricultural commodities or products thereof in interstate commerce, and to require these persons to obtain licenses authorizing them to carry on their customary activities in connection with these or competing products. These licenses might be suspended or revoked for cause, and the licensees could be required to furnish detailed information as to their business transactions in these products.

The Soil Conservation and Domestic Allotment Act. In January, 1936, the Supreme Court of the United States found the Agricultural Adjustment Act of 1933 unconstitutional by a 6 to 3 vote. The Court held that the Act constituted an invasion of states' rights, since the Constitution did not give the federal government the power to regulate agriculture, and its power to control interstate commerce could not be stretched to include

the regulation of agricultural production. Moreover, it was held to be improper for the federal government to purchase compliance with a federal program, and thus attain indirectly that regulation of local affairs which had been specifically denied it by the Constitution. While agriculture can hardly be considered a matter of local concern from an economic point of view, it appeared to be purely so according to this interpretation of the Constitution.

Since the federal government was unwilling to see American agriculture return to its previous chaotic state and since no permanent solution of the farm problem had been found, the government launched forth upon the discovery of a new farm program. In its search, it soon came upon the problem of soil erosion, upon which we commented earlier in this chapter. Satisfactory methods of combating soil erosion had been developed. Several types of close-growing vegetation, such as grass and alfalfa, are helpful in holding the soil in place and reduce water and soil losses very materially. Amazing results may be achieved merely by rotating such soil-conserving crops with the money crops, such as corn and cotton.

A method known as strip-cropping is also helpful in preventing soil erosion under favorable conditions of cultivation. Strip-cropping means the alternation of close-growing crops with the money crops in strips of a certain width, depending on the degree of slope and other factors. This method of controlling soil erosion often requires help from other mechanical methods, especially on the steeper slopes, for land is in danger of erosion whenever it is planted to cultivated or money crops. In such cases, methods such as terracing the land and using broad, contoured channel ways for drainage have often proved helpful in reducing sheet erosion and severe gullyng.

The chief difficulty with erosion control in the past was to get the farmers actively interested in it. The individual farmer often felt that he could do little about soil erosion by himself, or he lacked the financial resources which would permit him to make the attempt. Under unfavorable farm conditions, the farmers often considered it necessary to use almost all their land for money crops and to keep it planted to such crops year after year, in order to make ends meet. In 1936, after the A.A.A. was declared unconstitutional by the Supreme Court, the government decided to undertake a program of erosion control which would also help to solve the main farm problem.

Consequently, in February, 1936, a previously existing Soil Conservation Act was amended and enlarged to become the Soil Conservation and Domestic Allotment Act. The Act authorized the Secretary of Agriculture to restore the pre-war relationship between farm and city incomes for those farmers who agreed to practice specified methods of soil conservation and erosion control. Two classes of benefit payments were made available for farmers who cooperated. Payments for soil conservation were granted

to farmers for transferring a part of their soil-depleting base acreage to soil-conserving crops or uses, and other soil-building payments were made available for farmers who adopted certain approved practices to restore soil fertility, such as new seedings of legumes or perennial grasses; seedings of soybeans, cowpeas, and the like, for green manure; and the use of strip-cropping or terracing methods. The relation of this conservation program to the main farm problem is obvious. If the farmers used part of their land for crops which would be effective in preventing soil erosion, they could not use it for producing the basic money crops. In this way it was planned to kill two birds with one stone—to achieve some highly desirable results by way of controlling soil erosion, and at the same time to prevent the overproduction of the basic crops.

The Agricultural Adjustment Act of 1938. The soil conservation features of the Act of 1936 were undoubtedly desirable, but the Act proved rather ineffective in controlling agricultural production. By 1938, the prices of basic products had slumped badly, large surpluses were on hand, and additional large crops were in prospect. As a result, Congress passed the Agricultural Adjustment Act of 1938 in February of that year. This Act provided for the continued operation of the Act of 1936, and its payments to farmers, in normal times. In years of overproduction, however, rather stringent methods of control were to go into effect.

Control of agricultural production was carried on by means of acreage allotments, marketing quotas, and commodity loans. The acreage allotments were not compulsory in themselves, but they furnished the basis for setting up marketing quotas, and farmers who produced and sold the basic products in amounts exceeding their quotas could be made to pay penalties on the excess. The national acreage allotment for each commodity was made by the Secretary of Agriculture, and was the acreage estimated to be necessary to produce a normal year's requirements for consumption and export, plus an arbitrary amount for stocks, minus the amount carried over from the preceding year. The total acreage allotment was then divided among states, counties, and individual farms. Farmers who stayed within their allotted acreages received cash benefits from the government, in addition to the benefits of the soil conservation program.

According to the Act of 1938, there was "overproduction" whenever the supply (crop and carry-over) of a basic product exceeded "normal" by more than a stated percentage. For cotton, overproduction was any amount in excess of 107 per cent of normal; for wheat, 135 per cent; for corn and rice, 110 per cent; and for tobacco, 105 per cent. "Normal" in each case was the amount estimated to be necessary for a year's consumption and exports. When there was overproduction of any of the basic commodities, the Secretary of Agriculture could set up compulsory marketing quotas, but such quotas did not become effective until approved by two-thirds of the producing farmers voting in a referendum. The total

marketing quota was prorated to states, counties, and individual farms in proportion to the normal yields of their acreage. For the individual farmer, the marketing quota was the amount of a commodity that he could sell without incurring penalty. Basic commodities produced in excess of marketing quotas could not be fed to livestock for the market, given away, or traded for other economic goods. To avoid penalties, they had to be stored on the farms or in warehouses.

The Act of 1938 provided for loans to farmers to enable them to carry adequate reserves of basic products as a safeguard against lean years. The Commodity Credit Corporation was required to make loans on cotton, corn, and wheat, under conditions laid down in the Act, and could lend on any agricultural commodity. No loans could be made on cotton, corn, wheat, or rice in years in which marketing quotas had been declared necessary but had been rejected by vote of the farmers concerned. In general, loans were to be made whenever the price of a basic commodity fell below a specified percentage of parity, or when the crop estimate exceeded a normal year's consumption and exports. The parity price for a good, as under the original Agricultural Adjustment Act, was defined as one which would give that commodity a purchasing power (in terms of goods that farmers buy) equal to its purchasing power in the base period which, for most of the goods, was the period from 1909 to 1914. Minimum loan rates were set by the Act at 52 per cent of parity prices. Farmers who did not cooperate in the quota program could receive loans only in years in which marketing quotas were in effect, only on portions of their crops whose sale would not be subject to penalties under the marketing quotas, and only at rates which were 60 per cent of those extended to cooperating producers.

EVALUATION OF THE AGRICULTURAL ADJUSTMENT PROGRAM

The Agricultural Adjustment Act of 1938 had been in effect only a relatively short time when World War II broke out, and long before that conflict was over the main farm problem became one of securing adequate agricultural production instead of one of restraining production and avoiding large surpluses of basic farm products. Before examining the status of agriculture in the war period and its prospects for the future, it will be desirable to evaluate the Agricultural Adjustment Program as it operated from 1933 to 1940.

Gains for Farmers. The Agricultural Adjustment Program was successful in securing reductions in the acreages devoted to the basic crops and, with the help of other factors, such as weather conditions, it raised the prices received by farmers for these products. In 1932, as we have noted, prices received by farmers stood at 68 (1909-14=100) while prices paid

by farmers were at 124. By 1937, prices received by farmers had advanced to 122, while prices paid by farmers had increased only to 133.¹⁵ The ratio between these indexes was then 92, a level which had not been exceeded since 1920. At the same time, income from agriculture, which had amounted to only \$3,040,000,000 in 1932, increased to \$6,802,000,000 in 1937.¹⁶ Both agricultural prices and income, however, were considerably lower from 1938 to 1940 than in 1937.

The Prevention of Production Adjustments. In spite of these gains for American farmers, the operation of the Agricultural Adjustment Program was subject to a number of serious criticisms, several of which related to the attempt to secure and maintain rigid parity prices for farm products. The base period for parity prices goes back to the years 1909 to 1914 for a number of products, and the maintenance of parity prices disregards changes in relative costs of production which have occurred since that time and tends to prevent needed readjustments of agricultural production. For example, 89 man-hours were required to produce 100 bushels of wheat in the base period, and only 41 man-hours in the 1934-36 period. Again, the use of hybrid varieties of corn increased yields by 15 to 20 per cent with only a small increase in costs.¹⁷ On the other hand, increases have occurred in the labor requirements and cost of production for such things as vegetables.

In such a situation, parity prices treat the growers of some products much better than the growers of others. Even under parity prices, it becomes difficult to get adequate production of some crops whose costs have increased and, unless production control is very severe, it is difficult to hold down the production of others. If the government is to maintain prices for agricultural products, these prices should be kept flexible, so that they will reflect the changes which occur in relative costs of production and will not interfere with necessary adjustments of production.

If the production of some basic crop is to be curtailed, it would seem desirable to let low-cost producers turn out as much as usual, while eliminating certain high-cost producers entirely. However, the Agricultural Adjustment Program sought curtailed production and parity prices through percentage reductions in acreage on the part of all growers of a crop who were willing to participate in the Program. This meant, quite simply, that high-cost areas were kept in production at the same time that production was being curtailed in lower-cost areas, and the Program prevented desirable basic adjustments in production from taking place.

Exports and the A.A.A. While the Agricultural Adjustment Program did not succeed immediately in raising the prices of farm products to a

¹⁵ National Industrial Conference Board, *The Economic Almanac for 1945-46*, p. 170.

¹⁶ *Ibid.*, p. 168.

¹⁷ Board of Governors of the Federal Reserve System, *Agricultural Adjustment and Income*, p. 14.

parity level, a considerable increase in these prices did occur under its auspices and the prices rose to a level well above those prevailing in the rest of the world. This situation resulted in a low level of agricultural exports, and indirectly operated to restrain exports of manufactured goods which required the use of these high-priced farm products as raw materials. Moreover, any attempt to sell farm products abroad at prices lower than those prevailing in the United States was likely to be regarded as "dumping" from the point of view of other countries and to lead to antagonism and retaliation on their part. Thus the operation of the Agricultural Adjustment Program seemed to be in direct conflict with the Roosevelt administration's objective of producing an increase in the volume of our international trade. The disappearance of American farm products from world markets also produced some increases in world prices of the products, and tended to encourage the expansion of production in other countries.

This problem is likely to be troublesome in the present post-war period. For example, "Brazilian cotton Type 5 at the São Paulo market averaged 0.53 cents above the American Middling 15-16 at New Orleans from 1923 to 1929. From December, 1941, to July, 1945, the American domestic price has exceeded the Brazilian by from 6 to almost 12 cents per pound; a number of countries have shifted their purchases from American to Brazilian cotton partly because of relative prices and partly because of shortages of dollar exchange. While the United States was reducing the cotton acreage, Brazil almost tripled her acreage from the 1930-34 average of 2.4 million acres to 6.7 million in 1940."¹⁸

The Efficiency of Production Control. The success and cost of a policy of maintaining rigid parity prices for farm products depend to a great extent upon the efficiency of methods of controlling farm production, and the Agricultural Adjustment Program was not very successful in this respect. The lowest point reached by the index of the physical volume of farm production (1909-14 base) was 111 in 1935, and the index reached a new high point of 128 in 1937.¹⁹ The Program succeeded in reducing the acreages devoted to the basic products, but production remained high and later increased because of increased yield per acre. In the case of corn, for example, an average planting of 108 million acres was maintained from 1931 to 1933 and production averaged 2.6 billion bushels. In the period from 1939 to 1941, the area devoted to corn averaged only 87 million acres under the A.A.A., but production still averaged 2.6 billion bushels.²⁰ The greatly increased yield per acre resulted from the use of hybrid varieties of corn and improved crop rotation.

In order to curtail the *production* of a given crop by a certain desired

¹⁸ *Ibid.*, pp. 15-16.

¹⁹ *Ibid.*, pp. 3, 12.

²⁰ *Ibid.*, p. 16.

percentage, it is necessary to achieve a much greater percentage reduction in *acreage*, both because the land taken out of production will be the poorest land and because land used for producing the controlled crop is likely to increase in productivity as it is rotated between the controlled crop and other soil-building crops. The A.A.A. had serious difficulties, therefore, in controlling production when only a few basic crops were involved. The problem would be much worse if almost all phases of farm production had to be controlled. Farmers do not like to have their land and other resources lie idle. If they reduce their production of some crops, they are likely to increase the production of others. If the production of almost all farm products were controlled, there would be almost no place for the farmer to turn with any acres dropped from the production of a given crop; and it might be very difficult to maintain farmer participation in and compliance with the governmental control program.

Income and Standards of Living. The Agricultural Adjustment Program, in the period from 1933 to 1940, was not especially effective in increasing the income and efficiency of low-income farmers. In the year from July 1, 1935, to June 30, 1936, a year between the great depression and the prosperous war period, almost one-fourth of American farm families received less than \$500 of income, about 38 per cent received less than \$750, and only 8 per cent received more than \$2500.²¹ These figures included the rental value of the farm homes and the market value of farm products consumed on the farms. In other occupations in the economic system, only 16 per cent of the workers received less than \$750 in the year in question, and 17 per cent received over \$2500.²¹ Even in 1942, only 18 per cent of total agricultural income went to the 50 per cent of the farmers with lowest incomes.²²

Progress Toward the Controlled Economy. The Agricultural Adjustment Program tended to bring an ever-increasing number of farm products under price and production control. Starting with a few basic products, the Program spread to others because the farmers, as they reduced the acreage devoted to the controlled crops, planted their land to other crops and created "overproduction," surpluses, and low prices for these other products. It seemed that there would be no logical end to this process short of complete and strict governmental control over agricultural production in general. Indeed, some people feared that the controls would spread to manufactured products made from basic farm materials, to other products competing with these manufactured goods, and so on, until eventually a planned and controlled economy of socialism would be the result. Without altogether accepting this point of view and without any intention of arguing the relative merits of capitalism and socialism at this time, we may yet conclude that the development of stringent govern-

²¹ *Ibid.*, p. 4.

²² *Ibid.*, p. 18.

mental control over agricultural production and prices would be a step in the direction of a controlled economy of some type or other.

The Permanence of the Farm Program. One of the most serious criticisms of the farm program was the charge that the A.A.A., once instituted, could not be given up and would become a permanent policy. It can scarcely be stated too emphatically that the Agricultural Adjustment Program was not desirable as a permanent solution of the farm problem in the United States, because it did nothing to reduce the number of farmers in the country or the amount of land available for the production of the basic crops. When the demand for a manufactured product suffers a permanent decline, the industry reacts by producing fewer units than formerly and by allowing a part of its productive facilities to lie idle. Eventually, however, the industry tends to readjust its productive capacity to the changed conditions of demand, and only then can it be said to have met the problem created by the decline in demand. The Agricultural Adjustment Program led only to the first of these steps; that is, it induced the farmers to produce less than before and to allow part of their productive agents to remain unused. It did not lead to the apparently necessary curtailment of the land, labor, and capital employed in the agricultural industry.

In the period under discussion, 1933-40, A.A.A. payments to cotton farmers amounted to 1.3 billion dollars, which was over 25 per cent of the value of the cotton lint produced in this country during the period.²³ Even if we admit that doing nothing about prices and production would have been too slow and painful a method of forcing high-cost farmers to turn to some other type of farming, it is still reasonable to think that the government's money could have been spent in a more useful way over the period. That is, if the 1.3 billion dollars had been spent in adjusting the size of farms in the cotton-raising area, training the farmers to carry on a diversified type of agriculture, and lending them the funds necessary to effect the transformation, we might well have been closer to a permanent solution of the cotton section of the farm problem by 1940.

Despite the fact that many if not most people felt that the A.A.A. should be merely a temporary program, there was always a possibility that it might be continued indefinitely. Once the government had established the practice of paying cash benefits to the farmers, it threatened to be a most difficult matter, from a political point of view, to discontinue these benefits when it became economically desirable to do so. Hence, we were in some danger of seeing the farm program remain as an undesirable but permanent feature of our economic system, in much the same fashion that the protective tariff, created more than a century ago to protect infant industries, has remained to plague us long after some of these infants have become industrial giants.

²³ *Ibid.*, p. 15.

THE STATUS OF AGRICULTURE
DURING WORLD WAR II

Demand and Production. In the period of World War II, American agriculture was faced with an unprecedented demand for its products for use at home and abroad, and it responded nobly to this demand. In fact, agricultural production increased more rapidly during this war than during World War I. The index of agricultural production (1935-39=100) rose rapidly from 110 in 1940 to 136 in 1944 and 132 in 1945.²⁴ These results were achieved in spite of the fact that there was a severe shortage of new agricultural machinery and equipment, and that much labor was drawn from agriculture into other branches of production and into the armed forces. We had large stocks of grain on hand at the beginning of the war period, which made possible a rapid expansion in livestock production. Our farms were already so thoroughly mechanized that crop acreages could be expanded or at least maintained in the face of shortages of new equipment and labor; and unusually favorable weather conditions also played a part in increasing production.

Prices and Income. The prices of agricultural products were brought under price control at a later date than the prices of most other things, and rose rapidly during part of the war period. In 1942, the prices *received* by farmers became higher than the prices *paid* by them, for the first time since 1920. In 1944, the index of prices received was 195, and that for prices paid was 170, while in 1945 these indexes were 202 and 174,²⁵ respectively. This latter relationship meant that the farmers, in 1945, by giving up products that were worth \$1.00 in the base period (1909-14), could secure products valued at \$1.16 in the base period. With both farm production and prices rising, the incomes of farmers increased greatly in the war period. The net income from agriculture, which had been \$6,521,000,000 in 1940, rose to \$16,105,000,000 in 1944, \$16,831,000,000 in 1945, and \$17,927,000,000 in 1946.²⁶ These latter amounts were new all-time records.

Production Controls. In the war period, the agricultural problem was to secure enough farm products rather than to restrain production and prevent surpluses, so the various controls provided by the Act of 1938 could be largely relaxed. However, payments to farmers under the Soil Conservation and Domestic Allotment Act of 1936 went forward as usual during the war period. In addition, it was thought necessary to take certain steps to stimulate agricultural production. The most important of these was a series of Acts which placed price floors under agricultural

²⁴ *The Economic Almanac for 1946-47*, p. 119.

²⁵ *Ibid.*, p. 119.

²⁶ Bureau of Agricultural Economics, Department of Agriculture, estimates of November 6, 1946.

products and promised a continuance of parity price guaranties into the post-war period. Prices of cotton were to be guaranteed at 92½ per cent of parity, and those of wheat, corn, tobacco, peanuts, and rice at 90 per cent of parity, for two years after January 1 of the year following the official declaration of the end of hostilities, or, as it turned out, until December 31, 1948. A guaranty of prices at 90 per cent of parity for the same period after the close of hostilities was extended to a number of agricultural products not included in the above list of basic products, provided funds were available for the purpose when the time came.

FUTURE AGRICULTURAL POLICY

From the point of view of our needs during World War II, it was probably fortunate that a genuine reduction in the productive capacity of agriculture was not achieved during the 1930's, for we needed, at least temporarily, all the products which the industry could turn out. However, it would not be sound economic policy to keep agricultural capacity at an excessive level for decades at a time on the chance that we might need all of this capacity if a major war occurred. Since the productive capacity of agriculture was regarded as excessive even before World War II and since the war period brought great increases in agricultural production and added many acres to the area under cultivation, there is serious question as to what the status of American agriculture will be in the post-war period. Are we not likely to be troubled again with "overproduction" and growing agricultural surpluses, falling prices for farm products, and declining agricultural income?

Full Employment and Economic Stability. Under certain conditions it is possible that there will be no agricultural problem in the United States in the post-war period. One thing which would help greatly in preventing the development of such a problem would be the maintenance of a high and stable level of production, employment, and income in the economic system as a whole. As we have seen, agricultural production in general is remarkably stable through good years and bad, and has changed sharply only in wartime. Hence, agricultural production is not an important factor in producing booms and depressions in general business, though agriculture suffers heavily as a result of instability in the economic system as a whole. If the general level of economic activity in the country could be kept high and stable, there would be little need for special aids to agriculture. Consequently, agriculture must regard with great interest any plans which are made for stabilizing production and employment in the United States at a high level.

Agricultural Exports. Another factor which would be helpful is the development of export markets for farm products. During the war, American agriculture was producing for both this and other countries, and our

exports of farm products were abnormally large. It seems clear that, in the post-war period, agricultural production is likely to exceed the needs of the domestic market by a considerable amount. Our imports of agricultural products may increase to the pre-war level, individuals returning to civilian life from the armed forces may consume less food than formerly, manufactured goods will be available in larger quantities than during the war period, and people may not care to spend as great a proportion of their income on food as they did during the war years. Therefore, the need for agricultural exports will be great if farming is to operate at capacity. If such organizations as the International Monetary Fund, the International Bank for Reconstruction and Development, and the Economic and Social Council of the United Nations work successfully and produce a greatly enlarged volume of international trade in the post-war period, the result is likely to be highly beneficial for American agriculture.

The Maintenance of Adequate Diets. Agriculture would also profit from the attainment and maintenance of an adequate diet for the people of the country as a whole. It would be best, of course, if production, employment, and income could be kept at such a high level that the people could provide themselves with adequate diets through the purchase of farm products. In the absence of such a happy situation, the subsidization of food consumption for low-income families and the improvement of their diet would not only benefit national health and efficiency but also help to dispose of agricultural surpluses and raise the prices of agricultural products. Too much should not be expected from this source, however. It has been estimated that the provision of adequate diets for all low-income families in the country would absorb the production of only about five million acres of farm land over and above the acreage which would otherwise be necessary.

Monopolies and Agriculture. It seems, finally, that the status of agriculture in the post-war period will depend to some extent upon the success which attends our efforts to deal with the problem of monopolies and trusts. In the past, our farmers have been handicapped by having to sell their products in a highly competitive market while doing most of their buying in a market which was to a considerable degree controlled by monopolists, oligopolists, and monopolistic competitors. In the long period of good business prior to 1929, many of our manufacturing industries, being monopolistic or semi-monopolistic in character, were able to maintain stable prices in the face of improved methods of production and falling costs of production. Quite apart from the effect of this situation in producing the great depression, it made it difficult, if not impossible, for our farmers to get prices for their products which would enable them to share in the general prosperity of business.

Later, after the great depression broke in 1929, these monopolistic and semi-monopolistic industries were still able to maintain prices to a very

considerable extent. This they did by restricting production sharply, by turning off employees, and by reducing their purchases of raw materials. This course of action made it difficult for farmers to sell their raw materials and foodstuffs, and the uncontrolled prices of farm products had to bear the brunt of the depression liquidation. Thus, in a sense, the farmers under the Agricultural Adjustment Program were only giving our industrialists a taste of their own medicine, with the assistance of the government. The farm problem would have been much less severe in the past if competitive conditions had been maintained in industry, and it would be much less likely to reappear in the post-war period if the monopoly problem could be solved.

Forward Price Floors. While a happy combination of circumstances might forestall the reappearance of the farm problem in the post-war period, we cannot count on this result being attained. If worst comes to worst and general economic conditions remain unstable, agricultural exports decline to the pre-war level, agricultural surpluses reappear, and farm prices and income threaten to fall disastrously, governmental aid to agriculture will again be necessary. What form should it take? The most reasonable suggestion we have encountered is the establishment of forward price floors.²⁷

According to this proposal, an Agricultural Price Board (to be created by act of Congress) would set up price floors extending over one production period for the various farm products. Such floors would protect farmers against collapsing prices of farm products in any one year, and would enable them to plan production intelligently on the basis of foreknowledge of the relative prices of various products. The Board would try to establish its price floor for each commodity at such a level that market demand for and market supply of the good would be in equilibrium at that price.

In order to reach this objective and to free the Board from pressure from special interests in agriculture, the Board's freedom of action would be limited by a number of regulations. In the case of export commodities, the price floors established by the Board should not be allowed to exceed the world prices expected for the commodities during the forthcoming year. In the case of nonperishable products, the Board should be required to lower the price floor for any commodity in the year to come when the carry-over exceeded an established "normal" by 10 per cent, and to raise the price floor when the carry-over was 10 per cent below "normal." In the case of perishable products, the Board should be required to lower the price floor for the coming year whenever it had been necessary for the government to purchase a farm product in the open market and resell it at a loss. Finally, the price floor for any com-

²⁷ As discussed in Board of Governors of the Federal Reserve System, *Agricultural Adjustment and Income*, pp. 28-31.

modity should be raised in the coming year if its price exceeded the existing floor by 10 per cent.²⁸ In all cases, the prices of farm products would be kept from falling through the floors by means of the power of the Board to have the Commodity Credit Corporation purchase the products and either store or resell them at a loss. Since this action would necessitate lower floors in the following year, the program would not result in the maintenance of rigid prices for farm products or become excessively costly.

The program of using forward price floors would be superior in several respects to the continued use of a program for maintaining rigid parity prices based on a distant historical period. First, while fears of collapsing prices of farm products in any given year would be eliminated, the prices of individual farm products would be completely flexible in the long run. That is, even though price floors were used from year to year, the prices of some individual farm products could fall while those of others rose, as the costs of production changed in the various fields of agricultural production. Second, the program of forward price floors would not require direct and severe control of agricultural production by the federal government. Third, the program could be modified to provide for the special conditions prevailing in times of depression without producing rigidities which would later become difficult to eliminate.

In this last connection, the Board could be directed not to permit the price of any agricultural commodity to fall in a given year by more than 20 per cent of the average price in the preceding three years. Under this provision, five years of depression would be necessary to reduce the price of a farm product to 54 per cent of its pre-depression level. It is estimated that, if this system had been in operation, the prices of agricultural products would have fallen by only 20 per cent, instead of 40 per cent, between 1920 and 1921, and by 32 per cent, instead of about 55 per cent, between 1929 and 1932.²⁹ The decline in the prices of farm products during a depression would be controlled through purchases of the products by the Commodity Credit Corporation for resale at a loss.

This method of helping the farmers in depression periods would keep agriculture from bearing more than its share of the burden of depression. It would maintain the farmer's income through the prices received for his products instead of by direct subsidies or "benefit" payments. It would be relatively simple in operation and would go into action automatically when needed. Its cost could be financed in a way which would not curtail purchasing power elsewhere in the economy. It would permit lower prices of farm products to ultimate consumers and would not curtail production in non-agricultural fields. Finally, it would permit

²⁸ These suggested regulations are from *ibid.*, p. 29.

²⁹ *Ibid.*, p. 30.

the prices of individual farm products to remain flexible in relation to one another.³⁰

Other Policies. While the system of forward price floors was being applied to the main agricultural problem in the post-war period, other governmental agricultural policies might also be desirable. The soil conservation program should be continued, but it should be based on the physical necessities of soil conservation and not be a device, as in the past, for helping to control agricultural production. The production of individual farm commodities should depend on demand and supply (cost) situations, and the soil conservation program should be adjusted to the crop pattern which results. Crop insurance, to protect the farmer against the uncontrollable risks of his industry, began in a small way under the Agricultural Adjustment Act of 1938, was later repealed, and was reenacted in 1945. This system might well be extended in the post-war period. Finally, some measures for the reduction of agricultural poverty might be tried, for this problem remains even in years of generally high farm prices and income. The measures might include enlarging the farms used by low-income farmers, training these farmers for greater efficiency, making capital funds available to them, and possibly training some of them, who must leave agriculture, for jobs in other fields.

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1. Indicate the importance of agriculture in our economic system.
 2. In what sense has the problem of agriculture been one of overproduction? Explain.
 3. Why did American agriculture expand production during and immediately after World War I? Explain.
 4. What happened to agricultural prices and income during World War I?
 5. Discuss the demand and supply conditions which existed for agricultural products during the 1920's.
 6. How did agriculture fare in the great depression following 1929?
 7. How did the behavior of agricultural output and prices in the great depression differ from that of output and prices in certain manufacturing industries?
 8. Explain fully what is meant by "the insensitiveness of farming."
 9. "The burden of fixed costs to the farmer grew heavier during the depression." Explain.
 10. What is the nature of the problem of soil erosion? How is this problem related to the main agricultural problem?
 11. Were American farmers benefited by the high tariff rates placed on imports of farm products in 1922? Explain.
 12. How were the equalization fee and debenture plans expected to help the farmers? Explain.
 13. Discuss the Federal Farm Board experiment.
 14. Outline the farm credit policies of the Roosevelt administration.

³⁰ *Ibid.*, pp. 29, 30.

15. What was the relation of farm credit policies to the main agricultural problem? Explain.
16. What was the purpose of the Agricultural Adjustment Act of 1933? Explain.
17. What were the principal methods by which this purpose was to be accomplished? Explain.
18. Explain the dual purpose of the Soil Conservation and Domestic Allotment Act of 1936.
19. Why was additional farm legislation passed in 1938? Compare the provisions of the Agricultural Adjustment Act of 1938 with those of the Act of 1933.
20. Indicate the extent to which the status of agriculture improved under the Agricultural Adjustment Program from 1933 to 1940.
21. Why is it said that the Agricultural Adjustment Program prevented necessary or desirable adjustments of agricultural production? Explain.
22. How were agricultural exports affected by the Agricultural Adjustment Program? Explain.
23. Was the Agricultural Adjustment Program successful in reducing agricultural production? Explain.
24. Did the Agricultural Adjustment Program succeed in raising the income and efficiency of low-income farmers?
25. Was there danger that the Agricultural Adjustment Program might lead the United States to complete socialism? Explain.
26. "The greatest danger of the Agricultural Adjustment Program was that it would become a permanent program even though it did not furnish a satisfactory long-run solution for the main farm problem." Explain.
27. "The period of World War II was one of great prosperity for American agriculture." Explain.
28. Is it likely that the main farm problem of the 1930's may reappear in the post-war period?
29. What are the conditions under which there might be no agricultural problem in the post-war period? Explain.
30. If governmental assistance for agriculture is necessary in the post-war period, what form should it take?
31. Discuss the ordinary operation of a program of forward price floors for agricultural products.
32. What are the advantages of such a program as compared with one for the maintenance of rigid parity prices? Explain.
33. How could a program of forward price floors be used to control the decline of agricultural prices and income in periods of depression? Explain.
34. What would be the advantages of this program for aiding agriculture in depression periods?
35. What types of agricultural assistance might the government provide in the post-war period besides the operation of a system of forward price floors? Explain.

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Transportation

SPECIALIZATION AND LARGE-SCALE PRODUCTION ARE FUNDAMENTAL characteristics of the present economic order. An individual does not attempt to produce for himself all of the many economic goods he needs for the satisfaction of his wants, but instead specializes in a single task or a limited number of tasks, trusting that he may obtain, through the process of exchange, the other economic goods that he desires—goods which have themselves been produced for the most part on a large scale by other groups of specialists. Large-scale production brings with it many economies, but we often hear it said that the extent to which large-scale production (and its accompanying principle of division of labor) can be applied is largely limited by the size of the market for the products. The extent of the market is in turn greatly dependent upon the adequacy and efficiency of the means of transportation which have been or can be developed.

The Importance of the Railroads. In the United States, as in other industrially advanced countries, the railroad has for many years been the most important single means of transportation. In 1945, there were 226,696 miles of railroads in this country, counting only the first main track between any two points. If second, third, fourth, and other trackage is included in the total, the figure becomes 376,772 miles. The total reported property investment in our railroads amounted to almost 27 billion dollars in 1945, and the railroads carried 68.23 per cent of all the freight, express, and mail transported in the United States (in terms of ton-miles), as compared with 14.10 per cent for inland water carriers, 12.17 per cent for pipe lines, 5.49 per cent for motor carriers, and 0.01 of 1 per cent for airways.

In 1945, the Class I railroads (which means every railroad that has a net operating revenue of at least one million dollars per year) employed 1,419,505 workers on the average, carried revenue freight amounting to 684,148,000,000 ton-miles, and provided passenger service to the extent of 91,826,000,000 passenger miles.¹ Estimates for 1946 indicate that the Class I railroads carried revenue freight amounting to 590 billion ton-miles and furnished passenger service to the extent of 65 billion passenger miles. They employed 1,381,977 workers in November, 1946.²

¹ These statistics are from the *Sixtieth Annual Report of the Interstate Commerce Commission*, Washington, Government Printing Office, 1947, pp. 8, 137-141.

² *What's New?* Washington, Association of American Railroads, January, 1947, pp. 9, 32.

Clearly, it is important to everyone that an industry of such magnitude and vital significance in our economic system should be kept strong and vigorous, and capable of rendering cheap, efficient service. And yet, for many years between 1929 and the beginning of World War II, our railroads experienced great difficulty in earning sufficient net revenue to enable them to maintain existing plant and equipment satisfactorily and to attract enough new funds to make possible the construction projects and betterments which were necessary for continued efficient operation. Indeed, many roads failed to meet their obligations and went into receivership, and our railroads as a whole operated at a net deficit, after paying interest charges, in certain years. How were the railroads brought to such a condition? What can be done to improve their lot? How will they fare now that the prosperous wartime period is over? These are questions which we examine in the present chapter; and in doing so, we shall find it necessary to inquire into the affairs of the other forms of transportation in the United States. Our first task, however, is to consider the chief economic characteristics of the railroads.

ECONOMIC CHARACTERISTICS OF THE RAILROADS

The railroads furnish an outstanding example of an industry which tends naturally to become a monopoly. That is, the railroad industry is one in which free competition is wasteful, if not actually ruinous, and in which maximum efficiency and lowest costs of production can be obtained only when competition is eliminated or at least greatly restricted.

Increasing Returns in Railroading. One of the characteristics of railroads upon which the tendency to monopoly depends is what is usually called increasing returns. A railroad is a business that requires a heavy original investment. The interest upon borrowed capital, together with other fixed charges such as the rentals of leased lines, taxes, and amounts to be set aside for sinking funds to provide for maturing obligations, make up an important part of total costs of transportation, and a part which remains the same whether the railroad runs at full capacity or at only part capacity. As the traffic handled by a railroad increases, the operating costs increase, of course, but total costs do not increase in proportion to the increase in traffic, because of the large element of fixed costs. It follows, then, that as a railroad comes to be operated at full capacity, instead of at half capacity, the business that is handled doubles but the costs of transportation do not double, and, if the rates charged are assumed to be relatively constant, net earnings of the railroad increase.

There is nothing mysterious about the tendency described in the preceding paragraph, nor is the tendency peculiar to the railroad industry. Any industry which has a considerable amount of plant and equipment

will find that it is more economical to run at or near full capacity, rather than at some lower level. Nor should one be led to jump to the conclusion that the railroad is necessarily one of those industries which are characterized by economists as "industries of decreasing costs." The concept of decreasing costs, as usually described in connection with price determination in the long run, is concerned with the average cost per unit of product which the industry would experience as it adjusted itself to different volumes of production *through changing the amount of plant and equipment* and other productive factors devoted to production. Thus, an industry which would have a lower average cost of production per unit when its productive capacity and amount of plant and equipment used were large than when capacity and amount of plant and equipment were small, is to be described as an industry of decreasing costs. But, with either a large or a small amount of plant and equipment, any concern in the industry would find it more efficient to run at full than at part capacity, and would experience increasing returns in the sense that a railroad may experience them. The concept of decreasing costs, therefore, refers to the experience of an industry as a whole as it changes its productive capacity, while the concept of increasing returns as applied to the railroads refers to the experience of one concern in an industry as it more or less completely utilizes a given amount of productive equipment. It may be that the railroad fits into both classes, but the one does not follow from the other.

However, the tendency to increasing returns, as described above, is of particular importance in railroading, because it is more pronounced in the railroad business than in most other lines of production. As a result of this tendency, any gain in the volume of business handled is welcomed by a railroad, while any loss of traffic is a serious matter; and consequently, under a system of competitive rates, a wild struggle for traffic usually ensues.

Joint Costs in Railroading. A second important characteristic of the railroad business is that it operates under conditions akin to those of "joint costs." A railroad, of course, ordinarily furnishes only a single service, transportation; but a given train often carries a wide variety of articles—some of high and others of low value; some in carload lots, others in less than carload lots; some for long distances and others for short distances. The result is that the exact cost of a given unit of transportation cannot be discovered. What part of the total cost of operating a train for an 800-mile run, for example, should be charged to a ton of coal which is being carried for 63 miles in conjunction with 80 or 90 cars full of other commodities, of different values per pound, being carried for different distances, in lots of different sizes? It follows, then, that the rates charged by railroads for their services in connection with any particular lot of goods must be more or less arbitrary, being based

upon a notion as to "what the traffic will bear" rather than upon actual unit cost of production of the service.

We have already shown that the tendency to increasing returns in railroading appears most clearly when a larger volume of traffic than formerly handled is carried at approximately constant rates. Under conditions of competition, however, it does not take a railroad long to discover that it will be wise, at least from the short-run point of view, to add to its volume of traffic even if it has to reduce rates to attract the new business. As long as any new traffic will bring in enough revenue to cover the special costs of handling it, and in addition contribute something toward the costs which would persist whether or not the new business is taken on, it is profitable for a railroad to go after new traffic. Unfortunately, however, rate-cutting does not usually stop with the first cut. Unless the road with the increasing traffic has really attracted some business which would not otherwise have been carried, it has increased its own traffic at the expense of some other railroad or railroads, and one cut in rates usually leads to another, until business is being carried at rates insufficient to cover even the operating costs, not to mention the fixed costs. This process of competitive rate-cutting has often been described as "cut-throat competition."

THE DEVELOPMENT OF RAILROAD REGULATION

The American Railroad Industry Under Competition. In spite of the fact that the railroad industry is one in which competition tends to be wasteful, the construction and operation of railroads in this country went on under conditions of practically unrestricted competition for more than fifty years. Railroads were built far in advance of the needs of the territories to be served by them, and the pressure upon the railroads, with their large unused capacities, to go out and get business, at whatever cost, was irresistible. The result was severe and destructive competition, and rate wars were of frequent occurrence. In addition, certain other pernicious practices, such as local and personal discrimination, sprang up.

Local Discrimination. The most important type of local discrimination was that in which a given shipment of goods would be carried a long distance at a lower rate than that charged for carrying it a shorter distance. For example, as between New York City and Chicago, a low rate on a given commodity would be likely to prevail because of competition among several railroads operating between these two great terminals, while a railroad would charge a higher rate on this same good as between New York and some intermediate point at which competition with other railroads did not exist. Sometimes the rate charged to the intermediate point was the sum of the through rate from New York to Chicago

and the local rate from Chicago back to the intermediate point. So long as the through or competitive business paid for the special costs of handling it, and contributed something to the other transportation costs, it was profitable for the railroad to take it. Moreover, the rates to the local or intermediate points would not usually have been lowered if the railroad had given up the competitive business, for the local traffic would then have had to bear both the operating costs and the fixed costs in their entirety, whereas the through or competitive traffic contributed something toward the fixed costs.

Personal Discrimination. The pressure to get business, when railroads had unused capacities, manifested itself also in personal discrimination, which means charging one person more than another for substantially the same service, or giving one person more service than another while charging the two the same rate. Favors of this sort were granted by means of a great many devices which are too numerous to note here, and were accorded chiefly to the more powerful shippers, that is, to those who had the largest quantities of commodities to be transported. The effect of widespread personal discrimination is to reduce the railroads from the status of common carriers to that of contract carriers, or carriers which undertake each particular bit of transportation service on the basis of a separate agreement as to service and rate.

Attempts to Restrain Competition. Groups of railroads in different parts of the country at times became mindful of the ruinous nature of competition, and entered into agreements among themselves with the intent of restricting competitive activity. At times the subject of the agreements was rates, and the railroads would promise to maintain a given rate structure for a certain period of time. At other times, pooling agreements were entered into, and the railroads undertook to pool their traffic or the earnings from traffic, and to divide the business or the profits from it according to some prearranged ratio. While agreements of this sort were not punishable by law prior to 1887, they were nevertheless unenforceable at law, and there was every incentive for the railroads to attempt at times to evade the provisions of the agreements. As a result, most of these agreements did not enjoy long life.

Early Railroad Regulation. The disastrous effect of competition on the railroads, the complaints of shippers concerning local and personal discrimination, the fear of monopoly power under rate and traffic agreements, the speculation and fraud which pervaded railroad finance, and the attitude of railroad officials and executives toward the public, were some of the causes which influenced Congress to begin a long career of railroad regulation by passing, in 1887, the Act to Regulate Commerce. The legislation pertaining to the railroads has been constantly changing since that time, but it was only after almost thirty-five years of regulation that anything like a constructive approach to the railroad problem was

adopted in our railroad legislation. It will be impossible in this chapter to analyze in any detail the provisions of the various Acts which have been passed in regulating the railroads, but it is essential to an understanding of the railroad problem of today that the chief defects of the early railroad legislation be pointed out. The two principal defects were closely related.

The Negative Character of Early Legislation. One defect of our regulatory scheme prior to the last twenty-five years was that it concerned itself chiefly with provisions intended to keep the railroads within bounds, and to prevent the exploitation of the public through unreasonable transportation charges and arbitrary maladjustments in rate relationships. The principal aim of regulation was to wipe out railroad abuses, and consequently most of the provisions of the legislation took the form of prohibitions. For example, the railroads were warned that they must not discriminate between persons or companies, must not charge more for a short haul than a long haul unless granted specific permission, and must not enter into agreements for the pooling of traffic or earnings. From a positive point of view, not much was said as to what the rates should be. Our legislation did provide, of course, that rates should be "just and reasonable," but no significant meaning was given to these terms prior to the legislation passed in 1920. In short, the early railroad legislation treated in detail the things that the railroads should not do, but paid little or no attention to what they should do if the country was to have an efficient national transportation system. The items which were omitted from the regulation, rather than those which were included, seem to us to constitute the primary purpose of regulation.

The Policy of Enforced Competition. Though attempts were made, as was stated above, to eliminate some of the worst abuses which sprang up under competition, there was a continued insistence on competition as the condition under which the development of our railroad system should go on. "The anti-pooling clause of the Act to Regulate Commerce, and the prohibitions of the anti-trust laws as judicially applied to the railroads, created serious practical obstacles to the development of responsible relations between the carriers, to the elimination of personal preferences, to the stabilization of competitive conditions, to the achievement of such economies as coordination might render possible, and to the full and flexible utilization of the available plant and equipment. This condemnation of cooperative effort among the carriers through insistence upon the rigorous enforcement of competition, despite the subversive tendencies of such competition in the direction of rate fluctuations and discriminatory practices, and despite the difficulties of maintaining uniform charges among competitors of strikingly unequal strength, was but a reflection of the primary emphasis of the regulatory scheme upon restrain-

ing the potential overreaching of quasi-monopolistic power rather than upon the provision of a satisfactory system of transportation."³

The Railroads and the First World War. Because of the nature of our railroad legislation, its application brought results which were, in many respects, undesirable. We spent too much time seeing to it that railroad rates were not unreasonable or discriminatory, and gave too little attention to the question of efficient railroad transportation and to providing the railroads with a rate system which would permit them to earn a sufficient amount to enable them to attract into the industry the capital so necessary for continued efficient operation. Consequently, when the heavy traffic of World War I began to make unparalleled demands upon our railroads, they were unable to respond adequately. During this great national emergency, the wastefulness of competition in railroading and the importance of having an efficient national system of transportation were fully realized for the first time.

In order to avoid the complete breakdown of our system of railroad transportation which seemed imminent, the federal government undertook to operate the railroads during the participation of the United States in World War I and for some time afterward. It was impossible, of course, to revolutionize the railroad industry and transform it instantly from a disorganized and inadequate competitive system into an efficient national organization, but many steps were taken during the period of federal operation which augured well for the future. The railroads were operated "as a national system of transportation, the common and national needs being in all instances held paramount to any actual or supposed corporate advantage."⁴ Locomotives and other rolling stock were pooled and used as necessity dictated, without regard to ownership. Shipments of freight were moved to their destinations by the most direct routes, regardless of the wishes of shippers as to routes or the amount of use made of any particular railroad in the process. Certain railroads were compelled to share their terminals with other railroads, and repair shops were used jointly. Cars were loaded heavily and the demurrage rates, or charges for leaving freight in the railroad cars in excess of a reasonable length of time, were increased to speed up car unloadings. Passenger service was cut down, and consolidated ticket offices were introduced. The purchase of materials and supplies was centralized, new equipment was standardized, expenses for advertising were reduced, and valuable uniform statistics were compiled.

Whatever conclusion may be reached as to the financial or operating success of the federal control of the railroads, we may at least be thankful for the new attitude toward the railroads which prevailed after the war.

³ I. L. Sharfman, *The Interstate Commerce Commission*, New York, Commonwealth Fund, 1931, part I, pp. 79, 80.

⁴ *Ibid.*, p. 155.

When the question of the terms upon which the railroads should be turned back to their private owners was being considered, many different plans were evolved, and yet they all agreed more or less completely in one particular. This was that the growing transportation needs of the country demanded, through some method or other, the welding together of the many independent railroads, each formerly following its own self-interest, into an efficient national system of transportation. It appeared that only by some plan of consolidation or cooperation could economies in operation be achieved, and the railroad plant and equipment be efficiently utilized, while difficulties of rate regulation were being overcome.

THE TRANSPORTATION ACT OF 1920

The attitude toward the railroads described above received its first legislative expression in the Transportation Act of 1920. Under this legislation, the control of the railroads subject to the provisions of law was continued in the hands of the Interstate Commerce Commission, the agency set up for that purpose in 1887 by the Act to Regulate Commerce. The Interstate Commerce Commission is made up of eleven members, appointed for terms of seven years each by the President of the United States with the consent of the Senate. The work of the Commission is expedited by the provision that it may organize itself into as many divisions, of not fewer than three members each, as may be necessary to handle its business, and that each division may act independently of the others, with its decisions subject to reconsideration by the Commission as a whole. The Act of 1920 placed upon the Interstate Commerce Commission some new responsibilities which were expected to be of great import in connection with the solution of the railroad problem. We shall consider the provisions of the law and their operation under four headings—railroad consolidation, rates, securities, and service.

Railroad Consolidation. In the first place, the Act of 1920 was noteworthy in that the traditional emphasis on competition in the railroad industry was discontinued. The Interstate Commerce Commission was ordered to prepare and adopt a plan for the consolidation of the many railroads of the United States into a limited number of systems. In drawing up such a plan, the Commission was asked to bear two considerations in mind: (1) To preserve as far as possible the existing conditions and channels of trade, and (2) to make each system such a combination of weak and strong roads that, when uniform rates were applied throughout the country, each system would make substantially the same rate of return upon the value of its property devoted to the transportation service as that made by the other railroad systems. Under the consolidation plan (whenever formulated by the Commission), it was made lawful for two or more railroads to consolidate their properties for ownership, manage-

ment, and operation, subject to two conditions: (1) The Commission must approve the proposed consolidation as being in line with its final consolidation plan, and (2) the par value of the bonds and stocks of the new consolidation must not exceed the value of the consolidated properties as determined by the Commission.

As a temporary expedient, pending the adoption of the final consolidation plan, it was provided that the Commission could permit one railroad to acquire control of another railroad or other railroads, by means of leases, stock purchases, or any method not involving actual consolidation. In addition, while agreements for the pooling of freight or net earnings were still held to be unlawful in and of themselves, it was provided as another temporary expedient that the Interstate Commerce Commission could approve such agreements and render them valid, or even go to the length of taking the initiative in bringing them about.

The Benefits of Consolidation. The benefits, from a social or national point of view, which might be expected to result from the consolidation of the railroads of the country into a limited number of systems as provided in the Act of 1920, are familiar ones. First, they would make it possible to realize important economies in operation and to utilize to the maximum the existing plant and equipment of the railroads, by methods similar to those employed by the federal government during its operation of the roads. These methods would include, of course, the pooling of locomotives and cars and their use anywhere in the system, the joint use of terminals and other facilities, heavy loading of cars, centralized purchases, standardized equipment, and uniform statistics. In the second place, the consolidation plan would replace numerous existing lines, of varying financial condition and command over traffic, with a small number of systems of approximately equal strength. As a result, rate regulation would be facilitated.

Rate Provisions of the Act of 1920. Congress, in drawing up the Transportation Act of 1920, was mindful of the necessity for adequate earnings in railroading and tried to make provision in the Act for rates which would make such earnings possible. The Commission was given the power to establish both maximum and minimum rates and, by fixing both, to decide upon the actual rates. Furthermore, it was made the duty of the Commission to exercise its ratemaking powers in such a way that the railroads as a whole, or as a whole in such rate groups or territories as it might designate, would earn an aggregate annual net railway operating income equal, or as nearly equal as might be, to a fair return upon the aggregate value of the property of such railroads used in the transportation service. The valuation of the railroad property, and the determination of what constituted a "fair rate of return" upon such property, were to be in the hands of the Commission. In determining such fair rate of return, the Commission was to bear in mind the transportation needs of the

country and the necessity of expanding railroad facilities, if adequate transportation was to be furnished. It will be noted that no provision whatsoever was made for individual railroads to earn a fair rate of return. It was only for the railroads as a whole, or in certain groups as designated by the Commission, that fair returns were to be sought. The word "group" in this connection may, we believe, be taken to mean a group of railroads somewhat larger than one of the limited number of systems into which the railroads of the country were to be consolidated.

The Recapture Clause. It was realized, of course, that rates high enough to give a fair rate of return for the railroads as a whole or in large groups would furnish some strong roads enjoying good location and excellent physical condition the chance to make an excessive rate of return. The "recapture clause" in the Act of 1920 was intended to provide against this contingency. According to the provisions of this clause, any railroad which received in any year a net railway operating income of more than 6 per cent on the value of its property devoted to transportation was required to share the excess above 6 per cent with the government. One-half of the excess income was to be turned over to the Commission for the purpose of setting up what was called a "general railroad contingent fund," while the other half was to be held in a reserve fund by the railroad. When the amount in this reserve fund equaled 5 per cent of the value of the railroad's property, the fund could be drawn upon, but only to meet fixed charges and make dividend payments in years when its net operating income fell short of the 6 per cent level prescribed by law. The general railroad contingent fund, on the other hand, was to be used by the Commission to make loans at 6 per cent interest to needy railroads, for the purpose of developing equipment or refunding maturing obligations, or to buy railroad equipment and lease it to the railroads.

Railroad Securities Under the Transportation Act of 1920. A third division of the Act of 1920 concerned itself with the control of railroad securities. The principal purpose of such control was to make sure that the financial operations of the railroads in the future would be of such a nature as to provide a sound basis for the rehabilitation of railroad credit and for the development of the railroad system. In addition, it was desired to protect the investing public against loss through extravagant and even dishonest financing, such as had taken place at times in the past. The principal provision of the Act, with respect to securities, was to make it unlawful for railroads to issue their own securities or to assume any obligations in connection with the securities of other railroads unless, after their application to the Commission and after investigation by the Commission of the purposes and uses of the proposed financial operation, the Commission should give its consent. The Commission was given rather wide discretionary power in deciding these financial matters,

but it was asked to bear two considerations in mind: (1) The proposed transaction must be for some lawful purpose within the business of the railroad, and (2) it must be reasonably necessary and appropriate for this purpose.

Service Regulation. The fourth major problem touched upon by the Act of 1920 was that of adequate railroad service. Each railroad was ordered to furnish safe and adequate car service, and to set up and enforce reasonable rules and practices with regard to such service. Car service was taken to include the supply and use of rolling stock, the supply of trains, and interrailroad relationships with regard to rolling stock. The Commission was also empowered, when it considered such action desirable, to formulate reasonable rules and regulations to govern the railroad car service. In case of emergency, the Commission could abolish all existing regulations with regard to car service, and proceed (without regard to the desires of any particular railroads) to provide for the unified utilization of railroad facilities, for the joint use of terminals, for preference or priority for certain commodities in transportation, and for direct routing and expeditious handling of traffic.

Finally, the approval of the Commission had to be obtained before an existing railroad enterprise, or any part of it, could be abandoned, or any new construction of railroads undertaken. Furthermore, in this connection, the Commission was again given power to take the initiative, and order a railroad to provide itself with safe and adequate facilities for carrying on its car service, or to extend its lines by means of new construction.

Progress Toward Consolidation. Though the Transportation Act of 1920 represented a refreshing and desirable change of attitude toward the railroad problem, it did not furnish a satisfactory basis for the operation of the railroads in the years after its passage. In the first place, comparatively little progress has been made toward the consolidation of the railroads. It is true, of course, that the Commission in 1921 published a tentative plan which provided for the consolidation of the railroads of the country into nineteen systems. One system was to provide for the needs of New England, five were to be trunk-line systems between New York and Chicago, and five were to be transcontinental systems from Chicago to the Pacific coast. The lower Michigan peninsula was to have one system, and there were to be two soft coal lines from the Chesapeake Bay to the Great Lakes. Finally, there were to be three systems in the Southeast and two in the Southwest. Extended hearings were conducted to consider the plan, but little has been done toward putting it into operation. However, several railroads have been allowed to carry out plans for consolidation with other roads or for the acquisition of control over them as provided in the law.

It must be remembered that consolidation cannot be forced upon

the railroads by the Commission under the present law, and consolidation has not gone forward at a very rapid pace. In the first place, the strong railroads, those in good physical condition and with demonstrated earning power, have been unwilling to join forces with the weaker roads to form the type of systems called for by the Act of 1920, or at any rate to go into such consolidations except on terms rather unfavorable to the weak roads. And, in some cases, the railroad officials who would naturally carry on the negotiations for consolidation have not been anxious to do so for fear they might be forced to accept positions in the new system which were inferior to the ones they already held.

The Control of Railroad Securities and Service. The provisions of the Transportation Act which related to railroad securities were not of great practical importance in the first two decades following 1920. Especially after 1929, railroad earnings were low and railroad credit did not rate so high as in former times. The carriers consequently experienced considerable difficulty in refunding their maturing obligations on satisfactory terms, and new issues, for many roads, were practically out of the question. The control of railroad service by the Commission was a source of irritation to railroad executives. They complained that the situation was one in which a company could not extend its facilities if business was profitable, or abandon production if business resulted in large net losses, without the approval of a governmental commission, and in which a company might be asked to share its facilities with competing companies.

TABLE 55. THE RATE OF RETURN EARNED BY LINE-HAUL RAILROADS,
AND THEIR LESSOR SUBSIDIARIES, UPON THE AGGREGATE VALUE OF
THEIR PROPERTY DEVOTED TO THE TRANSPORTATION SERVICE,
1921-45^a

1921	3.04%	1933	2.03%
1922	3.89	1934	2.01
1923	4.72	1935	2.20
1924	4.64	1936	2.95
1925	5.15	1937	2.59
1926	5.45	1938	1.65
1927	4.68	1939	2.62
1928	5.07	1940	3.02
1929	5.31	1941	4.41
1930	3.62	1942	6.58
1931	2.21	1943	6.03
1932	1.37	1944	4.89
		1945	3.90

^a Dr. D. P. Locklin, Professor of Economics, University of Illinois, kindly furnished us with these rates of return which he had computed.

Railroad Earnings Between 1920 and 1940. The most serious criticism of the Act of 1920 is that, in the first twenty years of its operation, railroad earnings were never entirely satisfactory and sank to a very low level after 1929. Apparently many people thought that the Act had disposed,

for many years to come, of the problem of adequate railroad earnings; but a study of the net operating income of the railroads after 1920 discloses that this was decidedly not the case. The rates of net operating income of the line-haul railroads of the United States and their lessor subsidiaries, based upon the aggregate value of their property devoted to the transportation service, are shown in Table 55 for the years 1921 to 1945. These percentages are calculated on the basis of reported investment in railroad properties, plus materials and supplies and minus reserves for depreciation.

While it is difficult to say just what rate of return upon the aggregate value of railroad properties would be adequate, and no more than adequate, for the maintenance of an efficient transportation system, we may at least point out that the rates actually earned by the railroads between 1920 and 1940 were consistently below the rate determined upon by the Commission as one which it considered adequate and reasonable. The Commission decided in 1922 that, for the railroads as a whole, a rate of $5\frac{3}{4}$ per cent upon the aggregate value of the railroad properties used in the transportation service would be adequate; and it will be remembered that under the Act of 1920 the "recapture" of the earnings of individual railroads was to begin at 6 per cent. If the Commission's figure of $5\frac{3}{4}$ per cent is accepted as satisfactory for the railroads of the country as a whole, it is clear that the railroads, even in the period of relatively good business between 1921 and 1929, did not earn an adequate rate of return in any year.

Railroad Finances in the Great Depression. In the post-1929 depression, with its sharp decline in the volume of goods requiring transportation by any agency, the railroads were very hard hit. Their net earnings fell from 5.31 per cent in 1929 to the ridiculously low figure of 1.37 per cent in 1932. Between 1932 and 1940, the "peak" in railroad earnings occurred in 1936, when a rate of 2.95 per cent was achieved. The earnings rates we have presented are for net operating income *before the payment of interest charges on bonds*. After paying interest charges, the railroads had net deficits in 1932, 1933, 1934, and 1938, and very small net incomes in other years.

The number of passengers carried by the railroads, which had averaged 1,114,055,000 annually from 1916 to 1920, declined to 432,980,000 in 1933; and the revenue freight carried, which had averaged some 427,234,000,000 ton-miles from 1926 to 1930, fell to 233,977,000,000 ton-miles in 1932.⁵ Railroads failed in large numbers during the 1930's. At the end of 1940, 104 railroad companies with 75,765 miles of track were in receivership or trusteeship.⁶ This mileage represented 31 per cent of the total for

⁵ *Statistical Abstract of the United States, 1935*, pp. 368-375.

⁶ J. H. Parmelee, *A Review of Railroad Operations in 1940*, Washington, Association of American Railroads, 1941, pp. 9, 10.

the United States. Even heavier casualties would probably have occurred had it not been for the activities of the Reconstruction Finance Corporation and Public Works Administration in lending \$987,579,305 to the railroads during these troubled years. Of this sum, \$376,386,271 had been repaid by the railroads by the end of 1940.⁷

THE CAUSES OF THE RAILROAD PROBLEM

The Problem of "Fair Valuation." While the desperate situation of the railroads in the 1930's was largely chargeable to the post-1929 depression, the rise of competing forms of transportation and defects in rate-making and rate regulation were also contributing factors. The Transportation Act of 1920 directed the Interstate Commerce Commission to use its rate-making powers in such a way that the railroads as a whole, or in groups designated by the Commission, would earn a fair return on a fair valuation of their properties devoted to the transportation service. This rule of rate-making sounds eminently fair, but it is difficult to apply. To begin with, what is a "fair valuation" of the properties of railroad companies? The use of the value of industrial properties as the basis for determining what earnings should be granted the owners exactly reverses the customary economic procedure. For the value of productive facilities ordinarily *depends upon the earnings* which the owners are able to make with their help. The *earnings* are capitalized at the current rate of interest, and this capitalization is the *value* of the productive facilities. Clearly, the valuation of the railroad properties for rate-making purposes had to be made on some other basis.

To many persons, the *cost* of the railroad properties seemed to suggest their value, but the application of the cost formula was also difficult. Should the value of a railroad's properties be the amount actually spent in acquiring them, or should it be what would have to be spent, at the time of valuation, for new properties with equal productive capacity? If original cost, and not reproduction cost, is decided upon, should the original cost include all expenditures actually made by the railroad, or merely an amount which it would have been "prudent" or "necessary" to spend? The principle of a fair return upon a fair valuation has lost much of its significance for railroading since 1933, and does not warrant a detailed examination at this point. It will be considered more fully in our treatment of public utilities in the following chapter.

The Problem of a "Fair Return." The Transportation Act of 1920 provided for the recapture of the earnings of individual railroads in excess of 6 per cent on the valuation of their properties, and the Interstate Commerce Commission decided that $5\frac{3}{4}$ per cent was a "fair rate of return." To make $5\frac{3}{4}$ per cent on the aggregate value of their proper-

⁷ *Ibid.* p. 11.

ties over a period of years, the railroads would have to make higher earnings in some individual years, since they would certainly make less in others. It was possible, of course, for individual railroads to net more than $5\frac{3}{4}$ per cent in some years, by sharing with the government the earnings in excess of 6 per cent; but the rates which the railroads as a whole could charge for their services appeared to be adjusted in such a way that no more than the prescribed fair return would be earned by them as a whole in any year, while in some years the rate was certain to be less than that established by the Commission. This situation appears to be inconsistent with any satisfactory long-run interpretation of a fair rate of return.

Other Experiences with the Rule of Rate-Making. The rule of rate-making of the Transportation Act of 1920 was unfortunate in that it gave many people the idea that expert rate-making by the Commission would insulate the railroads against the effects of booms and depressions in general business, and afford the railroads a stable rate of return year by year. This hope has been shown to be entirely unrealizable by the events of recent years. The rule of rate-making apparently created, also, a disposition on the part of railroad executives to place complete responsibility on the Interstate Commerce Commission whenever the railroads failed to make a fair rate of return. Finally, the rule of rate-making has been shown to be a will-o'-the-wisp in a period of rapid technological change, such as that which has prevailed in the transportation field in recent years. Such technological changes usually require important readjustments in the industries affected, and may impose severe losses on established producers in the field. The investments which were made in the railroad industry may have appeared necessary and sound when they were made, but the rise of other forms of transportation may have rendered a part of the railroad facilities unnecessary and obsolete for purposes of peacetime transportation. Under such conditions, it may be impossible to set up any rate structure which will afford the railroads a fair rate of return on the entire actual investment which they made in their productive facilities, and it would seem logical to revalue the railroad properties so that the earnings which it is possible for the railroads to make will constitute a fair rate of return.

The Demand for Railroad Services. Some years ago, when the railroads provided the only satisfactory means of long-distance transportation, they could count on carrying most of the passenger and freight traffic of the country. In other words, the demand for their service was inelastic. Under this condition of demand, high rates for passengers and freight tended to yield better financial returns than low rates, and a rate increase could usually be depended upon to increase railroad earnings, if additional income was necessary.

But in recent years, motor vehicles and other carriers have developed

into efficient and satisfactory agencies of transportation. Consequently, the country is no longer absolutely dependent upon the railroads and, for some types of traffic, can take the railroad service or leave it, depending upon the comparative rates and service of the railroads and other transportation agencies. Hence, the demand for railroad service is relatively elastic in peacetime. Under this condition of demand, high rates may prove financially disastrous to the railroads, while low rates may bring increased business and improved net earnings.

Some events of the 1930's suggested that many railroad executives had failed to recognize the changes that had taken place in transportation, and continued to think of the service provided by railroads as absolutely essential. When railroad traffic and earnings declined rapidly after 1929, the railroads in 1931, 1935, 1937, and 1938 petitioned the Interstate Commerce Commission for increases in freight rates. Some of the requests were granted and some rejected, but the increases in freight rates were not very helpful in the face of poor business conditions, the small total volume of traffic, and strong competition from other types of carriers. The conservatism of railroad officials also manifested itself in the slowness with which they adopted improvements in railroad equipment and service, and by their opposition in 1936 to the Commission's decision to reduce railroad passenger fares in the hope of increasing traffic and earnings.

The Railroad Labor Situation. Another factor operating to accentuate the railroad problem was the favorable treatment which the railroads have been required by law to afford the workers in the industry. The federal government, in carrying out its policy of railroad regulation, has not hesitated to raise the status of labor in the industry. In 1916, the average railroad employee worked 3151 hours for an income of \$891.61, or 28.3 cents an hour. In 1940, the average employee worked a little over 2547 hours for an income of \$1913, or 75.1 cents per hour. Hence, he worked 19 per cent less time in 1940 than in 1916, but received wages amounting to 114 per cent more. The total wage bill of the railroads was almost 34 per cent greater in 1940 than in 1916, and the total number of employees was about 38 per cent smaller.⁸

The railroads are compelled by law to maintain safety appliances for the protection of their workers, and the employees, of course, receive free transportation from the roads for which they work. They also receive various financial benefits under such laws as the Railroad Retirement Act and the Railroad Unemployment Insurance Act. Recent proposals for the benefit of railroad workers include the payment of the same wages for six hours' work a day as are now paid for eight hours, and dismissal compensation for employees affected by abandonments or unifications of railroads. While these advantages may not be greater than the railway employees should enjoy, they have unquestionably constituted a heavy

⁸ *Ibid.*, p. 33; and *A Yearbook of Railroad Information, 1940 Edition*, pp. 62-66.

burden upon the industry in times of depression. On this account, a general 10 per cent reduction in railway wages was permitted, and became effective February 1, 1932. However, the 1931 level of wages was completely restored by April 1, 1936.

Competition in Transportation. Probably the principal factor giving rise to the railroad problem was the loss of passenger and freight traffic to automobile and water carriers, both before and during the post-1929 depression. To be sure, the figures for 1939 show that the railroads were still carrying 62 per cent of all freight in the United States, as against 26 per cent for motor and water carriers combined. However, the railroads in 1939 handled less than 9 per cent of the passenger traffic, of which almost 91 per cent moved in busses or private automobiles.

After many years and much legislation of the trial and error variety, we eventually arrived at the significant conclusion that consolidation and cooperation of railroad lines are preferable to their competition as a means of obtaining efficiency and economy. However, we have been slow to realize that it is equally likely that coordination and cooperation of the several types of carriers—rail, water, motor, and air—would be better than competition, from the point of view of developing an adequate and efficient national system of transportation. Of course, not all of the railroad traffic losses were due to the competition of other types of carriers. Moreover, the railroads have no legitimate grievance in connection with the loss of traffic to other types of carriers, so long as the traffic gains of these carriers are based on superior service, more efficient operation, and lower costs. But the railroads have often charged that traffic has been taken from them by unfair competition. Into this question we must look a little further.

Water Competition. There can be no doubt that there is a place for water carriers in our transportation system, but the railroads have complained that much of the traffic handled by water carriers was secured on the basis of costs that were low only because of special advantages and favored treatment received by these carriers—treatment not accorded the railroads. In other words, it is contended that the competition furnished by some water carriers is essentially unfair to the railroads.

Certain inland waterways have been constructed at heavy cost to the federal government, and have proceeded to charge shippers rates so low that the receipts would barely cover the operating expenses of these water lines. When this sort of thing takes place, the shippers, of course, are not paying the full costs of transportation, but are being subsidized because the taxpayers assume the expenses for fixed charges and maintenance. The railroads, on the other hand, must maintain tracks, bridges, and terminals, and pay their own fixed charges and taxes. Thus, they not only lose traffic to these waterways, but pay heavy taxes as well, part of which go to the support of the waterways, their competitors. Incidentally, the taxes paid by Class I railroads in 1940 amounted to \$396,000,000, or about

58 per cent of their net operating income of \$682,000,000, before paying interest charges.⁹

To take an extreme example, let us consider the Mississippi-Warrior Rivers Barge Line. It has been estimated that the government spent 600 million dollars on this system and its branches. After its construction as a war project during World War I, this barge line had, up to 1929, carried 7¾ million tons of freight at an average annual loss, borne by the taxpayers, of \$440,000; this figure is said to include no allowance for ordinary interest, taxes, and depreciation, such as a private transportation enterprise would have to meet.¹⁰

More recently it was estimated that, in 1940, every ton of freight which moved between St. Louis and Minneapolis by river cost the taxpayers \$5.77 over and above the amounts charged the shippers. Comparable costs to the taxpayers were \$41.61 per ton between Kansas City and St. Louis on the Missouri River, \$2.35 per ton between Pittsburgh and Cairo, Illinois, on the Ohio River, and \$1.48 per ton between Cairo and New Orleans on the Mississippi River.¹¹ Though some water routes may achieve better financial records than those we have mentioned, it is probable that most of the freight carried on inland waterways, amounting annually to many millions of tons, is transported at rates insufficient to cover total costs of production, if interest, maintenance expenses, and the taxes which would be collected from strictly private transportation agencies are included. This situation is clearly a cause for concern to the railroads.

Motor Competition. The competition of motor carriers was also serious during the 1930's. Not only did large numbers of people transport themselves from place to place by automobile, but common carriers by bus made quite a hole in the passenger traffic receipts of the railroads. In addition, large quantities of freight were being carried by truck, for both short and long distances. Some of the trucks operated as common carriers; that is, they ran over regular routes at specified times and served all comers. Others operated as contract carriers, furnishing each bit of transportation service on the basis of a separate agreement as to conditions of transportation, including rates, between the trucking company and the customers. Finally, many companies, engaged in other lines of business, did their own trucking.

The Advantages of Motor Carriers. Again, the railroads had no thought of contending that there is no place in our transportation system for carriers by motor, but they claimed that much of the competition furnished by these carriers was unfair to the railroads so long as motor carriers were unregulated as to rates and other conditions of service, and

⁹ J. H. Parmalee, *A Review of Railroad Operations in 1940*, p. 26.

¹⁰ E. E. Loomis, "Railroads vs. Waterways," *Review of Reviews*, February, 1929, pp. 79-82.

¹¹ *What Do You Get For Your Billions?* Washington, Association of American Railroads, January, 1947, p. 5.

enjoyed special advantages that were not available to the railroads in furnishing their transportation service. First, with regard to the alleged advantages enjoyed by motor carriers, it was pointed out that they are largely exempt from certain types of expense which the railroads have to bear. The roadbed for the motor carriers is the public highway, constructed and maintained at public expense, and the fixed charges on the investment in these highways are not paid by these carriers.

The motor carriers have shown that the heavy taxes which they pay are enough, or more than enough, to cover their share of the cost of constructing and maintaining the highways, but this is not quite the point. The motor carriers pay taxes, but these taxes represent their only contribution to the cost of constructing and maintaining their roadbed—the public highways. The railroads, on the other hand, claim that they have to construct and maintain their own roadbed, and in addition pay taxes which are at least as heavy as those paid by motor carriers. This claim must be discounted somewhat on the ground that rights-of-way, extra land, and in some cases money were given to the railroads by various governmental units many years ago.

In the second place, the railroads complained that the motor carriers were almost completely unregulated, since they were relatively free to charge any prices they liked for their services, whereas the railroads were not free to make changes in their rates to meet motor competition. Changes in railroad rates could be made, of course, but only slowly and with the consent of the Interstate Commerce Commission; and consequently the rates could not be made flexible enough to meet the rapid changes in rates open to the unregulated motor carriers. A truck owner could take a load a certain distance at a remunerative rate and, rather than return with an empty truck, could afford to pick up a return load at almost any price obtainable. With some exceptions, he could charge different people different rates for exactly the same service. He could charge more for a short than for a long haul, and was subject to almost no restrictions as to adequacy or regularity of service, being permitted to enter or quit the business at will. None of these advantages were enjoyed by the railroads. To have permitted competition between motor carriers and the railroads to continue on the terms described above, would have been to sanction a condition which was fraught with danger for the railroad industry, and to make it extremely unlikely that the railroads, being closely regulated, could earn a return adequate to insure continuous, efficient transportation service.

SOLVING THE RAILROAD PROBLEM

New Federal Agencies. As a result of the depression and other factors affecting the railroad problem, the railroad industry was in a woeful con-

dition when the Roosevelt administration took office in March, 1933. This administration, however, lost no time in trying to assist the railroads. In 1933 a law was passed creating the office of Federal Coordinator of Railroads. The duties of the Coordinator were (1) to encourage and promote, or require, the elimination of unnecessary duplication and waste, and (2) to recommend further legislation for the improvement of transportation conditions. However, the Coordinator did not actually require the railroads to cooperate or to coordinate their facilities, and the railroads were willing to do very little on a voluntary basis, so the accomplishments of the Coordinator were not important.

The office of Federal Railroad Coordinator was discontinued in 1936, but the Transportation Act of 1940 set up a Board of Investigation and Research for the transportation field as a whole. The Board had three members appointed by the President, and a statutory life of two years with a further extension of two years at the option of the President. The work of the Board fell into three general categories: (1) It was to study the extent to which public aid is given to rail, motor, and water carriers, and the taxes which are paid by these carriers to the various governmental units. (2) It was to examine the relative economy and fitness of these types of carriers, to determine the kinds of work for which each is especially suited and methods for developing the carriers into an adequate national system of transportation. (3) It had the power to investigate or consider any other matter relating to these transportation agencies which it thought might improve transportation conditions and effectuate the national transportation policy declared in the Interstate Commerce Act.

Rate-Making and the Recapture Clause. In 1933, the recapture provision of the Transportation Act of 1920 was repealed. This clause, it will be remembered, required individual railroads to turn over to the government one-half of their net operating income in excess of 6 per cent on the value of their properties devoted to transportation, and to place the remainder of such excess earnings in a reserve fund. The recapture clause had been a source of great annoyance to the railroads, though it probably was not a serious financial burden in view of the generally low railroad earnings since 1920. The clause seemed to be inconsistent with the declared principle of allowing the railroads to earn a fair return, in the long-run sense of that term, and we believe its repeal should be permanent.

The general rule of rate-making was also changed by the Transportation Act of 1933, and the emphasis is no longer placed simply on the "fair return on a fair valuation" as in the Act of 1920. The new principle provides: "In the exercise of its power to prescribe just and reasonable rates the Commission shall give due consideration, among other factors, to the effect of rates on the movement of traffic; to the need, in the public interest, of adequate and efficient railway transportation service at the lowest cost

consistent with the furnishing of such service; and to the need of revenues sufficient to enable the carriers, under honest, economical, and efficient management, to provide such service." Though this new principle is somewhat less definite than the old one, it will probably furnish a more satisfactory general basis for rate regulation.

Passenger Rates. The Interstate Commerce Commission, through its control of both maximum and minimum railway rates, holds the power to decide what passenger and freight charges are to prevail. In 1936, the Commission decided to investigate the effects of reduced passenger rates. It ruled that the basic passenger fare should be changed from 3.6 cents to 2 cents a mile in coaches, and to 3 cents in Pullman cars; and also eliminated the 50 per cent surcharge on Pullman service. It was hoped that these reductions would bring an increase in passenger traffic which would more than offset the lower fares, and thus yield the roads a greater net income from passenger traffic. The results of this experiment cannot be stated very definitely. Railroad passenger traffic picked up sharply under the low rates, but before the full effects of the reduced charges could be thoroughly tested, the business recession of 1937-38 brought an upset to all calculations.

The reduced fares affected only the eastern railroads, since the roads in other parts of the country had already reduced their passenger fares. In July, 1938, the Interstate Commerce Commission permitted the eastern roads to raise the basic passenger fare from 2 to 2½ cents a mile, and these roads promptly made the change. The increased rate was experimental, however, and in February, 1940, the Commission denied a petition by most of the eastern roads for the continuance of the rate. Over strong opposition of the petitioning railroads, which threatened to carry the matter to the Supreme Court, the Commission ruled that the basic passenger coach rate must return to 2 cents a mile as of March 24, 1940.

Improvements in Railroading. In the late 1930's, the railroads manifested a highly progressive attitude toward their business. Some adopted streamlined trains for certain routes, and these trains both increased the speed and convenience of the service and lowered the operating costs. Most roads installed air-conditioned passenger cars, and made other changes which increased the comfort and convenience of railroad travel. Many inaugurated what is called a store-door pick-up and delivery service, to make the railroad freight service comparable to that furnished by motor carriers, and in some cases began to operate their own trucks and busses. In 1940, 66 leading railroads announced a new scheme to increase passenger business by selling railroad tickets on the installment plan. The plan operated through a separate company, called the Travelers' Credit Corporation, and applied only to trips costing \$50 or more. Applications for credit were passed upon promptly, the customer obtained his ticket and took his trip, and payment was made in monthly installments. Such a

wide-awake attitude on the part of the railroads was likely to be much more conducive to a solution of their problems than their former "stand-pat" position.

Financial Reorganizations. Some railroads found a partial solution to their problems by means of financial reorganization. The Transportation Act of 1920 did not give the Interstate Commerce Commission complete control over reorganization, but the Commission could pass on petitions submitted by railroads under the Bankruptcy Act of 1933. Over a period of several years, the Commission approved reorganization plans for 29 out of 43 petitioning railroads. These plans, when finally put into effect, would have reduced the total debt (including unpaid interest) of these railroads from \$4,056,426,489 to \$1,749,573,800, and their obligatory fixed charges from \$141,580,228 to \$39,120,559.¹²

The Motor Carrier Act. A very important development in the transportation field was the passage, in 1935, of an act to regulate motor carriers. The Act did not actually become operative until several months of 1936 had elapsed. While this legislation was not intended primarily to protect other forms of transportation, but rather to improve and stabilize conditions in the motor carrier industry itself, the competition of motor carriers has affected the railroads so seriously in the past that we may well consider briefly the provisions of the Motor Carrier Act.

Provisions of the Act. The law applies to common carriers, contract carriers, and brokers engaged in interstate commerce by motor vehicles, but not to private carriers, except possibly with respect to safety regulations. The Act gives the Interstate Commerce Commission authority to prescribe rules governing employees, hours of service, and standards of equipment in the motor carrier industry. The numerous exceptions to the application of the law include school busses; taxis; hotel busses; motor vehicles operated by the Department of the Interior in the National Park Service; motor vehicles used by farmers; motor vehicles of cooperative agricultural associations; trolley busses operated by electric power; motor vehicles carrying livestock, fish, and agricultural commodities exclusively; motor vehicles carrying newspapers exclusively; transportation within municipalities and adjacent areas; and, casual, occasional, or reciprocal transportation by a person not engaged in transportation as a business.

Common carriers must secure certificates of public convenience and necessity, and must show the need for their service and their willingness and ability to perform it. Their business may include movements between fixed terminals and over regular routes, and only such business, but equipment and facilities may be added freely. Contract carriers must secure permits to operate, and must show the need for their service, their ability to perform it, the nature of the goods to be transported, and the territory to be served. They do not operate between fixed terminals, or

¹² *Fifty-Eighth Annual Report of the Interstate Commerce Commission*, p. 15.

over regular routes. Brokers, or persons other than carriers and their agents who sell transportation which is subject to the Act, must secure licenses, and show the need for their service and their ability to perform it. Common carriers already in operation on June 1, 1935, contract carriers in operation on July 1, and brokers in business on October 1, were allowed to secure certificates, permits, or licenses without further proof by making proper application before the last available date fixed by the Commission.

Common carriers must file rates and abide by them, subject to heavy fines for transporting without filing rates or for charging rates other than those on file. The rates must be reasonable and non-discriminatory, and may be changed only upon thirty days' notice to the Commission and the public. Contract carriers need file and publish only minimum rates. They may charge more than these rates, but changes in the minimum rates require thirty days' notice. The Commission does not have authority to prescribe the original rates for the motor carriers, but upon complaint or on its own initiative it may suspend and investigate any rates except the original ones. It may investigate the lawfulness of the rates on file and if, after holding hearings, it finds that rates do not comply with the law, it may prescribe new rates.

For purposes of enforcement, a division of four members of the Commission was created to supervise all matters pertaining to motor vehicles. Under this division, a motor carrier bureau was established with district offices in various parts of the country. Violations of the law are subject to a \$500 fine for a first offense, and \$2000 fine for each additional offense. These penalties apply to both shippers and carriers. The common carriers must give bills of lading for goods transported, and the carrier which first handles a shipment is responsible to the shipper for any loss, damage, or injury caused by it or any other carrier, but the first carrier has a claim upon a subsequent carrier if the fault lies with the latter. The Commission controls security issues, consolidations, mergers, and acquisitions of control in the industry, and may recommend additional legislation. It is also authorized to investigate and report on the need for regulations as to the size and weight of motor vehicles.

At the very outset of the operation of the law there was considerable confusion. Motor carriers filed tariffs and then requested immediate changes. In some cases they failed to collect the published rates and fares, and did not make their tariffs available for public inspection. Sometimes the rates announced by carriers differed considerably from those announced by their authorized agents, and the carriers complained grievously about one another. It was clear that there were considerable practical difficulties to be overcome in enforcing this law, because there were so many operators and because the business of many motor carriers was by no means so regular, well established, and easy to supervise as that of the railroads.

Motor Rates and Rail Rates. It has been common practice for motor carriers to disregard the traditional railroad principle of basing freight rates on what the traffic will bear. They have usually charged flat rates for transporting freight without regard to the value of the articles and the rate classes in which the railroads classified them, or have charged a flat rate at least for articles in the first three classes of the railroad freight classification. This practice developed from the high degree of competition in the motor carrier industry, which led operators to emphasize the *cost of service* rather than *value of service*. Its effect was the diversion of a considerable amount of freight traffic in articles of high value from the railroads to the motor carriers.

The railroads adopted a number of devices to meet this situation, the simplest of which was to lower freight rates on individual articles, reclassify such articles, or grant exceptions to classifications. Again, they developed "all-freight" or "all-commodity" rates for carrying freight, usually in carload lots, without regard for the classifications of individual articles that made up the shipments. These all-freight rates are commonly between 36 and 50 per cent of the rates on first-class freight. In some cases, flat railway rates on loaded trucks, trailers, semi-trailers, or "containers," when loaded with almost any kind of freight, have been authorized by the Interstate Commerce Commission.

The railroads have long charged lower rates for carload shipments than for less-than-carload lots of freight, but there have been no special rates for shipments involving several carloads or even a trainload, and no gradations between the carload and less-than-carload rates. Recently, however, the Interstate Commerce Commission has permitted some railroads to fix lower rates for multiple-carload shipments than for carload lots; and the railroads may thus be able to recover some of the freight traffic that has been moving by water in cargo lots. The railroads have also begun to establish graduated "volume rates" for large less-than-carload shipments. For example, the less-than-carload rate may apply to shipments up to (say) 5000 pounds, a somewhat lower rate to shipments between 5000 and 10,000 pounds, a still lower rate for shipments from 10,000 to 20,000 pounds, and so on until the rate is reached for full carload lots.

While these changes in railway freight rates have been developing, the motor carriers have moved in the direction of the rate-making policies of the railroads. In many cases they now use railroad classifications of freight, or very similar classifications, and their freight rates are the same, or almost the same, as those of the railroads. However, common carriers by motor can scarcely afford to adopt railroad freight classifications and rates unless the contract carriers can be made to do the same, or unless the trucking operations of contract carriers and of industrial or other firms can be restricted. In general, the movement of motor carriers toward railroad freight classifications and rates seems undesirable, for its com-

pletion would deprive the public of the economies of motor transportation. Motor carrier rates should probably be allowed to rest on the competitive basis of cost of service, with business divided between the railroads, motor carriers, and other transportation agencies on the basis of convenience, efficiency, and cost.

Water-Carrier Regulation. While the Motor Carrier Act brought another large section of the transportation field under the jurisdiction of the Interstate Commerce Commission, the Commission had only limited control over water carriers. That is, where joint rail and water routes were used, and in the cases where railroads were allowed to own water carriers, the Commission had jurisdiction. There was great need for the regulation of water carriers, comparable to that which had been applied to railroads and motor carriers. In the Transportation Act of 1940 that need was met. With the exception of contract water carriers which do not compete with common carriers, and common or contract water carriers of commodities in bulk whose cargo space is not used for more than three commodities at one time, the control of common and contract water carriers was placed in the hands of the Interstate Commerce Commission. The Commission may prescribe maximum, minimum, or specific rates; and it has control over the entry of firms into water carrier service, consolidations of firms, security issues, accounts, and other matters which it controls in the case of rail and motor carriers. The air transportation industry has also been thoroughly regulated since 1938, under the Civil Aeronautics Act and the Civil Aeronautics Board, but this development was of less importance because of the very small volume of traffic that has moved by air up to the present time.

The National Transportation Policy. The Transportation Act of 1940 was also noteworthy for its statement of a national transportation policy. It said:

It is hereby declared to be the national transportation policy of the Congress to provide for fair and impartial regulation of all modes of transportation subject to the provisions of this Act, so administered as to recognize and preserve the inherent advantages of each; to promote safe, adequate, economical, and efficient service, and foster sound economic conditions in transportation and among the several carriers; to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices; to cooperate with the several States and the duly authorized officials thereof; and to encourage fair wages and equitable working conditions;—all to the end of developing, coordinating, and preserving a national transportation system by water, highway, and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the Postal Service, and of the national defense. All of the provisions of this Act shall be administered and enforced with a view to carrying out the above declaration of policy.

Certainly no one can quarrel with the general objective of fair and impartial regulation of all modes of transportation, but there may be some question as to what the objective involves. To many people, it would mean similar if not identical regulation of carriers by rail, motor, and water; but there are some reasons for believing that this approach is unsound. Carriers by water and motor are in general numerous and rather small, in comparison with the railroads. Their investments in plant and equipment and their fixed costs are smaller than those of the railroads, and the tendency to increasing returns is less pronounced. Motor and water carriers are not so likely, therefore, to engage in rate-cutting and cut-throat competition to attract additional traffic. It is somewhat easier for them, than for the railroads, to ascertain the cost of carrying goods, and their rates are more likely to be based upon cost of service than upon what the traffic will bear. Unlike the railroads, motor and water carriers do not often have a monopoly with respect to a large part of their traffic, and are unlikely to practice discrimination and to charge exorbitant rates. Finally, motor and water carriers can more readily adjust their facilities to increases or decreases in the volume of current traffic.

These considerations suggest that the regulation of rail, motor, and water carriers in exactly the same ways and to exactly the same extent would fall short of the stated objective of fairness and impartiality in regulation. However, it does not follow that motor and water carriers should be unregulated. The failure to regulate them would be unfair to the railroads, and would neglect the interests of the country as a whole, since motor and water carriers serve the public, enjoy public assistance, and make use of public property. Moreover, it does not follow that motor and water carriers should not be controlled by the same commission which controls the railroads. Unification and centralization of regulation in a single commission may be desirable, even though there should be differences in the nature and extent of regulation as between types of transportation.

TRANSPORTATION IN WARTIME

Railroad Traffic and Earnings. In spite of all that was done, the railroads experienced great difficulty in making ends meet, and their net operating income remained very low through 1940. However, World War II changed the picture. Gross national product increased from 88.6 billion dollars in 1939 to 187.4 billions in 1943, to 197.6 billions in 1944, and 197.3 billions in 1945; and there was a great increase in the quantity of commodities requiring transportation. Moreover, the 11,000,000 members of the armed forces had to be carried back and forth across the country, and large numbers of people who normally transported themselves by private automobiles in previous years were ruled off the highways as the result of gasoline rationing. At least temporarily, then, we needed

all of our productive capacity in the railroad industry, and could have used even more.

The railroads were rather poorly equipped to handle the tremendous job of transportation which the war thrust upon them. The number of freight cars available was 22.8 per cent lower in 1941 than in 1929, the number of passenger cars other than Pullman was 28.8 per cent lower, and the average number of employees was 31.0 per cent lower. Nevertheless, with very modest increases in equipment and an increase of 23.9 per cent in the number of employees, "the railroads in 1944 performed 55.1 per cent more freight service (ton-miles) than they did in 1941 and 225.3 per cent more passenger service (passenger miles). This remarkable increase in intensity of utilization of freight facilities is reflected in an average increase of 14.7 per cent in tons per car, a 48.6 per cent increase in ton-miles per car, a 24.4 per cent increase in tons per train, and a 57.6 per cent increase in ton-miles per mile of road. Passengers per car increased 113.3 per cent, and per train, 174.0 per cent; passenger miles per mile of road used in passenger service advanced 237.0 per cent."¹³ The wartime accomplishments of the railroads were truly remarkable. As a result of the great volume of traffic, the net operating income of the railroads increased from \$690,554,000 in 1940, to \$1,499,364,000 in 1942, to \$1,370,569,000 in 1943, and \$1,113,153,000 in 1944.¹⁴ The rate of return on the value of the railroads' properties increased from 3.02 per cent in 1940 to 6.58 per cent in 1942, 6.03 per cent in 1943, and 4.89 per cent in 1944.

Other Carriers. Motor carriers of property carried 34.5 per cent more tons of goods in 1942 than in 1940, and the corresponding percentages of increase for 1943 and 1944 were 49.3 and 49.6, respectively. The increase in average load per vehicle from 1941 to 1944 was 30.4 per cent for common carriers and 24.7 per cent for contract carriers.¹⁵ The percentage increase over 1940 in intercity passengers carried by motor carriers of passengers was: 1942, 134; 1943, 244; and 1944, 262. There was an increase of 46.5 per cent in the loading per bus.¹⁶ The amount of revenue freight carried by water carriers varied comparatively little during the war period, but the number of barrel-miles carried by oil pipe lines increased from 282 million in 1940 to 393 million in 1943 and to 438 million in 1944.¹⁷ There were also considerable increases in the volume of air traffic over the war period, but the total traffic remained extremely small as compared with the total traffic of all types of carriers.

On the financial side, the net operating revenues of Class I motor

¹³ *Fifty-Ninth Annual Report of the Interstate Commerce Commission*, p. 2.

¹⁴ *Ibid.*, p. 135.

¹⁵ *Ibid.*, p. 3.

¹⁶ *Ibid.*, p. 4.

¹⁷ *Ibid.*, p. 146; and *Fifty-Seventh Annual Report of the Interstate Commerce Commission*, p. 163.

carriers of passengers increased from \$34,005,000 in 1941 to \$147,530,000 in 1943 and to \$143,807,000 in 1944; but those of Class I motor carriers of property apparently declined over the war period, though the exact result is difficult to determine because of the change which took place in the number of carriers.¹⁸ The revenues of water carriers showed no noteworthy trend during the war period, and the net income of pipe-line companies declined somewhat between 1940 and 1944.

TRANSPORTATION IN THE POST-WAR PERIOD

The General Outlook. The prospects for transportation, at the close of World War II, were hard to assess. As the Interstate Commerce Commission said:

The situation abounds in uncertainties, not the least of which are as to the level of activity which business will maintain, the future of labor costs and taxes, and the effects of public expenditures on transportation facilities. Moreover, improvements in the instrumentalities of transportation mean new and heightened competition. The keynote of the post-war years will prove to be this quickening and extension of competition within and among the several forms of transportation and with private carriers. This competition has become identified in the public mind with the inroads which the commercial airlines are planning, and in part already are making, in the travel market, and in handling light freight. Competition between rail, motor-carrier, water, and pipe-line transportation, however, will undoubtedly increase in intensity. These various conditions emphasize the responsibility on us in seeing, so far as our powers permit, that the public interest is promoted and advanced along forward-looking lines and in the light of the national transportation policy declared by Congress in 1940.¹⁹

Prospects for Motor and Water Carriers. There were a number of favorable factors in the outlook for motor carriers of property and passengers in the post-war period. Wartime necessities had brought them valuable experience with economical operating practices, some of which could be carried over into peacetime operation. Technological improvements in vehicles and fuel had been made. Several states had liberalized their size and weight limits for motor carriers. Equipment notes and other obligations could be issued at relatively low interest rates. And better highway and street facilities were sure to be available as a result of federal, state, and local expenditures.

On the other side of the picture, the motor carriers needed large numbers of new vehicles to replace obsolete and worn-out equipment, and it was certain that these vehicles would have to be purchased at high cost, though fortunately their operating efficiency promised to be superior. The

¹⁸ *Fifty-Ninth Annual Report of the Interstate Commerce Commission*, pp. 143, 144; and *Fifty-Seventh Annual Report of the Interstate Commerce Commission*, pp. 162, 163.

¹⁹ *Fifty-Ninth Annual Report of the Interstate Commerce Commission*, p. 7.

motor carriers also faced difficulties in adjusting themselves to higher wages of labor and other costs, which were all the more serious because their rates were somewhat below those charged by the railroads. Finally, the motor carriers were threatened with the loss of a considerable volume of wartime traffic to which they had become accustomed and for which they had acquired additional equipment in some cases, and they had a problem of restoring services which had been suspended during the war.

Some water carriers ceased operating in their own right during the war, but most of these were able to secure substantial revenue by chartering their vessels or by operating as agents of the War Shipping Administration. Most water carriers came out of the war in sound financial condition. There were some gains in operating experience during the war, some obsolete and inefficient equipment was discarded, and marked technological improvements in vessels were made. On the other hand, the new ships were sure to cost more per ton than those which they replaced, and water carriers which ceased operating temporarily faced the problem of restoring physical operation, reestablishing contacts with shippers, and regaining traffic carried by other forms of transportation during the war.

The Railroad Situation. The outlook for the railroads in the post-war period was more favorable than it had been for many years prior to the war. The railroads had carried the vast volume of wartime traffic with only small increases in their investment in rail facilities. Consequently, they were not extensively overbuilt and were able, when they needed facilities in the post-war period, to take full advantage of recent technological advances. The railroads were in generally sound physical condition. Deferred maintenance during the war amounted to only about \$350,000,000, or 5.7 per cent of the total maintenance expense (excluding depreciation and amortization) in the years 1942-45.²⁰ Increased costs and high taxes had reduced the railroads' net operating income in 1943 and 1944, as compared with 1942, but their financial condition was much better than before the war. Reduced debts and fixed charges, as a result of reorganizations and of ordinary refunding and refinancing, were also important in the financial picture.

The railroads were better off in some ways because of their wartime trials and experiences. Knowledge (acquired during the war) of more efficient and economical operating practices was useful also in peacetime operation, and certain gains resulting from close cooperation between the railroads and their customers in wartime were maintained. Finally, the needs of wartime and the prospect of severe competition after the war tended to speed up improvements in railroad facilities. Many railroads had well-defined plans for discarding worn-out and obsolete equipment and for making major improvements in order to secure lower costs and give better service.

²⁰ *Ibid.*, p. 8.

However, a number of factors were less favorable. There was a strong prospect of rising prices in the post-war period, and these are always of concern to the railroads, with their comparatively inflexible rates. Second, the labor situation was threatening. We have already spoken of the relatively favorable treatment of railroad labor which existed as of 1940. In 1941, after extended discussion, attempts to mediate, and threats of a strike, the railroad unions and management reached an agreement, about a month before Pearl Harbor, which called for an average increase of 12½ per cent in the wages of railroad workers. The railroad labor situation was rather quiet during the actual war period, especially after wage rates and salaries in general were frozen at existing levels late in 1942. However, the railroad labor unions sought higher wages almost as soon as the shooting war was over, and succeeded in getting increases in wages by arbitration late in 1945. In spite of this fact, the railroad unions demanded still higher wages and went on strike in the spring of 1946. In the end, the workers received new wage increases amounting to 18½ cents an hour on the average, and most of the increases were made retroactive to January 1, 1946.

Third, the railroads were burdened with very heavy taxes. Total taxes paid by the roads increased from \$398,725,000 in 1940 to \$1,854,136,000 in 1943, and to \$1,849,909,000 in 1944.²¹ This load could be carried successfully in wartime, but even if lowered somewhat would be a heavy burden in the face of any considerable fall in traffic. Finally, the railroads could be sure that other types of carriers would give them keen competition if there should be a decrease in the total volume of traffic demanded by the public.

The outcome of these conflicting factors was not favorable to the railroads in 1946. Their wage bill amounted to \$4,086,000,000, or \$1,457,000,000 more than would have been necessary at the wage rates prevailing in 1940.²² Higher prices for fuel, materials, and supplies added many millions of dollars to railroad operating expenses. On the other hand, freight ton-miles were 14 per cent lower than in 1945, passenger traffic was 29 per cent below that of 1945,²³ and the railroads received no significant increase in freight and passenger rates effective during the year. The result was that the rate of return on the value of the railroads' properties, which had reached 6.58 per cent in 1942 and had fallen to 3.90 per cent in 1945, declined further, to about 2.90 per cent in 1946.

The Interstate Commerce Commission on December 5, 1946, authorized the railroads to make increases in freight rates averaging about 17.6 per cent, and to continue in effect the 10 per cent increase in passenger fares authorized in 1942. The new freight rates became effective January 1,

²¹ *Ibid.*, p. 135.

²² *What's New?* January, 1947, p. 10.

²³ *Ibid.*, p. 3.

1947; and, assuming that the railroads did not lose traffic to other transportation agencies under the higher rates, these rates were expected to produce \$800,000,000 in additional railroad revenues.²⁴ While the outlook for the railroads, even with such increased revenues, is none too favorable, we believe that a "wait and see" attitude should be maintained with regard to further proposals for solving the railroad problem. In other words, we think the time is not yet ripe to lend an ear to those individuals who contend that the railroads can no longer operate successfully under private management and insist that we should proceed at once to bring them under governmental ownership and management.

1. Why are the railroads important in our present economic system?
2. What is the nature of the "railroad problem"?
3. What is meant by saying that the railroad industry is one of increasing returns? How does the concept of increasing returns differ from that of decreasing costs?
4. Why are the railroads said to operate under conditions akin to those of joint costs?
5. Under what condition did the railroad industry operate during the early years of its life in this country? What abuses sprang up in connection with the railroads during this period? Why?
6. In what respects was the early legislation affecting the railroad industry defective? Explain fully.
7. What adjustments in railroad operation were made necessary by World War I? Why?
8. Why does consolidation in the railroad industry appear desirable?
9. What were the provisions of the Transportation Act of 1920 with regard to consolidation? What progress toward consolidation has been made under this law?
10. How did this Act undertake to control railroad service and the issuance of railroad securities?
11. What were the provisions of this law with respect to railroad rates and earnings? Explain.
12. How were railroad earnings affected by the Act of 1920?
13. How did the railroads fare in the depression years of 1929 to 1933?
14. Discuss the difficulties involved in applying the principle of a "fair rate of return on a fair valuation."
15. How was the "recapture clause" related to the problem of obtaining a fair rate of return for the railroads? Explain.
16. What change has apparently taken place in the nature of the demand for the services of the railroads? How has this change been related to the railroad problem?
17. "In general, the rule of rate-making provided by the Act of 1920 has proved unsatisfactory in practice." Discuss.

²⁴ *Ibid.*, pp. 2, 3.

18. What was the significance of the railroad labor situation in connection with the railroad problem?
19. To what extent was the railroad problem due to the competition of other transportation agencies? Explain.
20. Why was the competition of motor and water carriers characterized as unfair by the railroads? Were the contentions of the railroads with regard to this competition sound? Explain.
21. What happened to the rule of rate-making and the recapture clause in recent legislation?
22. "The railroads are likely to make greater net earnings from passenger traffic with low fares than with high fares." Discuss.
23. What improvements did the railroads make in their equipment and operation during the late 1930's?
24. Summarize the main provisions of the Motor Carrier Act of 1935.
25. How did motor and railroad freight rates change in the last few years before World War II?
26. How were the regulatory powers of the Interstate Commerce Commission extended by the Transportation Act of 1940?
27. "If carriers by rail, motor, and water are to be treated fairly and impartially, they should all be regulated in the same way and to the same extent." Discuss.
28. What happened to the traffic and earnings of railroads and other transportation agencies during World War II?
29. What is the general outlook for transportation in the post-war period in the United States?
30. What are the post-war prospects for motor and water carriers?
31. "The railroads of this country entered the post-war period in relatively good condition." Explain.
32. What are the unfavorable factors in the post-war railroad situation?
33. Should the railroads be brought under governmental ownership and operation at once? Explain.

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Public Utilities

THE RAILROADS, WHICH WERE DISCUSSED IN THE PRECEDING CHAPTER, ARE regarded as public utilities by some writers, while others, though admitting that railroads are "public utilities" in many essential respects, prefer to treat them separately. This separation makes for convenience in discussion, for the railroads have been regulated very largely by the federal government, whereas the control of public utilities has been carried on almost entirely by the state governments.

THE NATURE OF PUBLIC UTILITIES

Natural Monopolies. It is not easy to draw up a complete list of public utilities, since the items included under this heading change from time to time. Among the activities which have been classed as public utilities at one time or another are street railways; water, gas, electric, telephone, and telegraph companies; steamship lines; grain elevators; and stockyards—in addition to the railroads. When used in conducting such activities, private property is no longer strictly *private*, because in such uses it becomes "affected with a public interest."

What is it that causes a business to be classed as a public utility? One thing is the possession of the characteristics which make it a "natural monopoly." A natural monopoly is a type of business in which competition usually results in duplication of equipment and great waste. Imagine, for example, the waste which would occur if a city were served by two competing street railway systems, with duplicate tracks throughout the town, and duplicate rolling stock, power lines, and operating personnel. Each of these companies might be confidently expected to have a higher cost of production per unit of service than the cost would be if a single transportation company were operating in this city.

Most public utility businesses require a huge original investment in plant and equipment, and have large fixed or overhead costs. Such businesses enjoy increasing returns as they increase the volume of business transacted with a given amount of productive facilities, since the additional business increases only operating costs, and not fixed costs, while the total revenues expand considerably. Consequently a public utility company undertakes to

get as much business as possible and, when two utilities offer the same service to the same customers, their relations often degenerate into cut-throat and destructive competition. Such a condition, marked by violent rate-cutting, is likely to last until one company is ruined or absorbed by the other, or until the competitors see the light and agree to combine. Even if competition were as economical as monopoly in these businesses, it might still be desirable to have some of them operated as monopolies. In telephone service, for example, it is important, in the interests of convenience, for all telephone users to be subscribers in a single company, rather than to have them distributed among several companies. As a result of these and other considerations, governmental units have come to recognize the need for monopoly in such businesses, and have permitted and even encouraged monopoly operation.

Essential Products. A second characteristic of public utilities is that their products, whether services or commodities, are generally regarded as vitally necessary to the public. In our large cities, thousands or hundreds of thousands of people look to surface, subway, and elevated railway lines for transportation, and their dependence upon other public utilities, such as electric companies, is so great that a stoppage of service, even for an hour or two, may lead to considerable inconvenience or even to genuine suffering. In the field of communication many individuals and businesses depend largely upon the telephone or telegraph service. In general, the demand for public utility services is inelastic. To be sure, the demand for (say) gas, on the part of some users at least, may be elastic because of the existence of satisfactory substitutes, but the demand for heat, light, or power in some form or other is relatively inelastic.

Franchises. A third characteristic of public utilities is that many of them are dependent, for the right or power to operate, upon privileges or favors granted them by the public through various governmental units. Street railways, and water, gas, and electric companies, must use public streets or highways, or the areas above or below such streets and highways, in the conduct of their business, and are given grants, or "franchises," by state and local governments for this purpose. Moreover, governments sometimes grant public utilities the right to condemn private property for necessary purposes or to use public water power in their business.

Differential Rates. A fourth characteristic of public utilities is that a company, such as one supplying electric current, is usually permitted to sell its service to several classes of consumers for different purposes at different prices. It is quite impossible to determine the *exact* cost of supplying the service to any particular class of consumers and, as a result, the rates charged are likely to be arbitrary and to be based upon "what the traffic will bear."

THE REGULATION OF PUBLIC UTILITIES

With public utility businesses operating as monopolies in their particular areas, producing essential economic goods for which the demand is relatively inelastic, and depending in many instances upon special privileges or favors granted by the state, it is clear that the unregulated operation of these businesses by private enterprisers might result in great evils, including extortionate rates for inferior service and unfair discrimination between different consumers or classes of consumers. The possibility of operation of an anti-social nature led to early regulation of public utilities—so early, indeed, that the problems connected with public utilities were almost completely local in character, and their regulation could scarcely have been assumed to fall within the constitutional powers of the federal government. As a result, the regulation of public utilities has been conducted largely by the states.

Public Utilities Commissions. This regulation has not ordinarily been undertaken directly by state governments. Rather, the regulatory powers have been delegated to commissions. Some of the better-equipped public utility commissions have powers similar to those exercised by the Interstate Commerce Commission in regulating the railroads. They often control rates and fares, extensions and abandonments of service, the issuance of securities, the prevention of undue discrimination between different customers and classes of customers, the quality of the service, the valuation of utility properties, and accounting methods. Of all these many items, the most difficult and important is, of course, the regulation of rates.

The Regulation of Rates. The states, and their public utilities commissions, were at first left quite free to regulate the rates charged by public utilities. The courts, including the United States Supreme Court, refused to interfere with what was so obviously an exercise of powers granted to state governments by the Constitution and would neither set aside prescribed rates nor themselves set up rates for the utilities. Eventually, however, the court attitude changed and the Supreme Court decided that if rates set by state governments or their commissions were so unreasonable as practically to destroy the value of the properties of public utilities, they could be set aside as violating the "due process" clause of the federal Constitution. Thereafter, the commissions, while trying to protect the interests of consumers, have been kept from setting public utility rates at so low a figure that they would be confiscatory with respect to the properties of public utilities; and the general idea has developed that rates should be regulated in such a way as to enable the utilities to earn a "fair rate of return on a fair valuation of their properties."

The Problem of Valuation. It is all very well to say that the utilities should be allowed to earn a fair rate of return on a fair valuation of their properties, but quite another matter to apply the principle to specific

cases. The first difficulty is to establish a fair valuation. The property of a public utility scarcely has a value, in the usual economic sense of exchange value, since it is seldom bought and sold and is hedged about with restrictions and regulations which do not affect ordinary property. The value of a piece of industrial property is usually determined by the income it is capable of earning. But in the case of public utilities, earnings depend upon rates and these rates (if they are to represent a "fair return") cannot be set until after the "fair valuation" has been determined. Therefore, the commissions have had to turn to other methods of evaluating the properties of public utilities. The problem of valuation has usually been approached by way of "prudent investment cost" and "reproduction cost."

Prudent Investment Cost. Prudent investment cost is ordinarily taken to mean the amount of capital actually invested in a public utility enterprise, corrected for capital expenditures dishonestly made or made in a clearly wasteful or extravagant manner. There are several possible ways of arriving at prudent investment cost. It is sometimes said that the par value of the stock of a public utility represents satisfactorily the amount of the actual investment in the business. This criterion, however, could not be applied to all public utilities, since some have issued stock with no par value. Moreover, there may be only a vague relationship between the par value of a utility's stock and the actual value of its property. Some public utilities are overcapitalized, and have outstanding an amount of stock well in excess of the value of their properties. For example, a public utility company, just starting in business and short of cash, may wish to acquire a piece of property without paying cash for it. To induce the owner to accept stock in lieu of cash, the company may have given him stock which has a par value well above the cash value of the property that is being acquired. Of course, to allow public utilities which are overcapitalized to earn a fair return on their capitalization would be to grant them an excessive return on the actual value of their property.

Again, the par value of a company's stock may at one time have represented accurately the value of its property, but no longer do so because through poor management the utility has lost some of its original assets or had them depreciate in value. Or the property of a company may increase in value without the increase being reflected in the amount of capital stock outstanding. In either case, a fair rate of return on the basis of capitalization would give a return on the actual value of the property which was either larger or smaller than it should be. Consequently, capitalization has little to recommend it as a basis for valuation.

Another proposal is to assume that the market value of a public utility's stock represents the present value of its property. About all that can be said for this method is that a valuation could be readily obtained by finding the total value of the company's stock on the stock exchange. Such a valuation would be most unsatisfactory, however. The value of the company's

stock depends largely upon the rate of return which prospective owners hope to obtain by holding it, and the total value of its stock tends to be its present and probable future rate of earnings, capitalized at the current rate of interest. Since the total value of the stock depends upon the company's earnings, to make the earnings dependent upon the total value of the stock would be to reason in a circle. If a company were at present making an excessive return upon its actual investment, its stock would tend to sell well above par. And if the present value of its stock were taken as its valuation, a fair rate of return on this valuation would permit the continuance of an excessive rate of return upon the actual investment.

Original Cost. If we were to use prudent investment cost as a method of valuation, it would be necessary to find a satisfactory method of converting the term into action. This might be done, it is often said, by taking prudent investment cost to mean the actual original cost of a public utility's properties, adding the cost of additions and improvements, and deducting any depreciation in the properties or loss of assets. It is argued that such a valuation is eminently fair to all concerned. It grants a public utility a fair return on the capital actually invested in the business, as of the present time, and the utility has no right to claim better treatment. Moreover, it protects consumers from having to pay rates which would give the company a fair rate of return upon an excessive valuation of its properties. Finally, the valuation on the basis of original cost, once ascertained, would not change except when actual changes in investment occurred in the future, and it would provide a stable basis for rate regulation.

But there are some drawbacks to this method of valuation. One is the obvious difficulty of ascertaining original cost. Many public utility properties were acquired long years ago, and records of the transactions may have been lost or destroyed, if indeed they were ever kept. If a company originally acquired property by giving the owner stock instead of cash, should the original cost of the property be construed to be the par value of the stock given, or an estimate of its cash value at the time? Or if, at some time in its career, a company has bought out competitors, through either cash purchase or the exchange of securities, and, in order to be rid of the competitors, paid an excessive price for their properties, should original cost be interpreted to mean the price actually paid or only the construction value of the properties? Should an allowance be made the company for the original cost of promoting the company, of building up good will, and of acquiring a franchise and, if so, how large an allowance? How can we prevent companies from padding their costs, if original costs are used as the basis for valuation? These and other questions suggest that there is considerable room for error in estimating original cost.

Even if it should be possible to ascertain original cost accurately, there is no assurance that this method of valuation would be fair to public utility companies and investors at all times, since it does not take into

account changes in the general price level. The original cost method gives a fixed valuation to a public utility company's property, and a fair rate of return on this valuation means a relatively fixed money income. In a period of falling general prices, this stable money income would give increased purchasing power to the company and its stockholders, and impose a correspondingly heavy burden on the consumers, while in periods of rising prices it would bring decreased purchasing power for company and stockholders, and the consumers would be obtaining public utility services at bargain prices. This objection is not so serious as it sounds, however, for public utility commissions do not guarantee the utilities a stable money income. They merely try to regulate rates so that utilities will *normally* make a fair rate of return on the value of their property. Even if the rates are not reduced in a period of falling prices, the volume of business done at these rates will likely decline to such an extent that a utility's real income will not be enhanced unduly; and if rates are not raised in a period of rising prices, the increased volume of business at these rates may serve to keep the utility's real income from declining severely. However, the long-time upward or downward trends in general prices may serve to affect, either favorably or unfavorably, the purchasing power of the income received by public utility companies.

It is also said that the original cost method of valuation tends to discriminate between the consumers of the services of different utility companies. If one company's plant was constructed and its property acquired at a time when prices and costs were high, its consumers would have to pay rates sufficiently high to give the company a fair return on its high original cost. At the same time, the customers of another utility may be charged much lower rates because this company's plant was constructed and its property acquired at a time when prices and costs were low. Finally, the original cost method, when first introduced, may work a hardship upon persons who have bought the stock of public utility companies because of the high actual earnings of the companies and high returns paid on the stock. When the companies are subsequently limited to earning a fair return on the original cost of their properties, the dividends may be sharply reduced so that the stock will decline in value and deprive the owner of a part of his investment.

Reproduction Cost. The principal alternative to the use of prudent investment cost for valuation purposes is valuation on the basis of the reproduction cost of public utility properties. In applying this method, the cost of reproducing or replacing a company's properties is estimated and this figure is adjusted for depreciation, or the supposed difference in value between the actual properties and similar new properties. Of course, if the properties are not allowed to depreciate, an adjustment is not necessary. Valuation on the basis of reproduction cost is a more recent development than valuation on the basis of original cost, and

is more flexible and therefore more readily adjustable to changing business conditions. Moreover, it is said to be in stricter conformity with the dictates of economic theory. Since business enterprises ordinarily plan future production on the basis of prospective prices and prospective costs, rather than upon the basis of costs incurred in past production, it is held to be more logical to evaluate public utility properties for rate-making purposes on the basis of reproduction cost, rather than original cost.

However, it is difficult to get a definite valuation by the method of reproduction cost, for several obstacles stand in the way. Should reproduction cost be taken to mean the cost of constructing identical productive facilities or substitute facilities which would have the same total productivity? Should it be estimated as under present conditions and methods of construction or under methods and conditions which existed when the company's productive facilities were constructed? What would it now cost to acquire the company's franchise or build up the good will which it developed in the past? These questions are more readily asked than answered, and in the absence of satisfactory answers the proper valuation of a company's properties on the basis of reproduction cost is a debatable matter.

The flexibility of valuation on the basis of reproduction cost may be an advantage or a disadvantage. When the general price level falls, the cost of reproduction falls also, so that a lower valuation for a property is appropriate, whereas the reverse is true in a period of rising prices. Assuming that the rate of return remains unchanged, the money income of the company will decline as the purchasing power of money increases and will increase as the purchasing power of money declines, so that the real income of the company and its stockholders should remain fairly constant. In general, a fluctuating money income and stable real income would be preferable to a stable money income and fluctuating real income. However, this adjustability means that the valuation of a company would never remain stable for any great length of time, since it would change with changes in the general price level. As a result, a company's valuation would be constantly in a state of flux and neither the company nor the regulating commission would have anything definite to go on. The cost of reproduction method is advantageous in that it does not discriminate between the consumers of different utility companies, as does the original cost method; for two substantially similar plants would probably be given approximately the same valuation on the basis of reproduction cost, however different their original cost may have been because they were constructed at different times and under different cost conditions. Furthermore, the use of reproduction cost is likely to cause plants to be built efficiently and at low cost, since original cost will not affect valuation or earnings, while under the original cost method

there is an incentive to make the original cost high for valuation purposes. However, on the whole, the weight of opinion favors the original cost interpretation of prudent investment cost as the basis for public utility valuation.

The Fair Rate of Return. In addition to deciding, upon some basis or other, the valuations to be placed upon the properties of public utility companies, public utility commissions have to decide upon a fair rate of return on these valuations. This, also, is a difficult matter. The commissions must protect the public against the monopoly powers of public utilities, but at the same time the companies must earn enough to cover costs of production, so that they may render efficient service, maintain their productive facilities, and attract new capital for purposes of expansions and improvements. Moreover, in addition to deciding the rate of return they would like the utilities to earn on the basis of their valuations, the commissions must determine the prices for services which are most likely to produce the desired rate of return for the utilities, keeping in mind the uncertainty of business conditions and possible variations in the cost of producing the services. A given set of prices will produce different rates of return for different companies with identical valuation if the managements of the companies differ in efficiency. While problems of valuation and fair rate of return have attracted more attention than the problem of arriving at prices which will bring in the fair rate of return on the fair valuation, this latter problem is a very trying one.

Public utility valuation and rate regulation are so complicated that they are often dealt with in complete volumes, but enough has been said in the present chapter to enable the reader to appreciate their difficulty. Under the circumstances, it is not surprising that attempts by several agencies to determine the fair valuation and fair return for a public utility company have resulted in valuations which varied by hundreds of millions of dollars, and in proposed earnings in which the largest exceeded the smallest by 100 per cent.

In view of the attitude taken by the courts, it is not usually possible for public utility commissions to abandon openly the principle of a fair return on a fair valuation of property. However, in determining what a fair return is, a commission does not need to function in a vacuum. In Massachusetts, for example, the commission is said to take into consideration principally the economic situation of a public utility company. It considers whether the company is paying dividends on its stock, whether the stock is selling at or above par on the market, whether the company is providing adequate depreciation reserves and is accumulating a reasonable surplus, and whether its operating and maintenance expenses are being increased or decreased under current business conditions—and only then is the commission ready to hand down a decision in a rate case. The

commission makes no attempt to give the public utilities a specific *percentage* rate of return on the value of their properties, but merely tries to control rates so that the companies may pay dividends that are sufficiently high to keep the value of their stock above par and permit the utilities to market additional securities, when necessary, at not less than par. This attitude seems to have much to recommend it.

The Success of Public Utility Regulation. It was necessary for the state governments to delegate the regulation of public utilities to public utility commissions, for direct regulation by state legislatures would scarcely be feasible. But it must be admitted that commission regulation has not been entirely satisfactory. This may be accounted for in part by the fact that the commissions have been set to work solving problems for which there are no wholly satisfactory solutions. Some commissions have been given adequate powers and ample expert assistance, so that they have been able to operate successfully, but the reverse is true in many cases.

Many conditions among public utilities which the commissions were expected to remedy have continued to exist. They have often been unable to prevent utility companies from inflating or writing up the value of their assets, or from selling securities amounting to much more than the aggregate value of their assets. Indeed, it is probable that total overcapitalization in the public utility industry runs into billions of dollars. While the commissions have usually discounted to some extent the claims of public utilities with respect to the value of their properties, it is nevertheless true that the official valuations of these properties have often greatly exceeded the amount of the actual investment. A fair rate of return on an excessive valuation is equivalent, of course, to an excessive rate of return on a fair valuation.

Even if the valuation were perfect and the rate of return fair, the common stockholders of a utility company might still receive an unduly high return on their investment, because of the low fixed rates of return to holders of bonds and preferred stock. When the valuation is excessive, and the fair rate of return represents a very high return on total actual investment, the earnings of common stockholders on their investment may run to four or five times the nominal fair rate of return. It is true, also, that commissions have been unable to prevent excessive discrimination between different classes of customers. Of course, no one contends that all customers should be charged the same rates for (say) electricity, regardless of the amount of power used or the hours at which they use it, but electric companies have been known to sell a large part of their power to other utility companies at less than cost, and to industrial users at but little above cost, while charging domestic or residential consumers from fifteen to twenty times the average cost of generating and transmitting the current.¹

¹ C. D. Thompson, *Confessions of the Power Trust*, New York, E. P. Dutton & Co., Inc., 1932, pp. 216-227.

Weaknesses of the Commissions. While the regulatory problems faced by the commissions are very complicated, it is probable that much of the ineffectiveness of regulation has resulted from the inadequacy of the powers granted to some commissions and to defects in their personnel. The commissions control only electric light and power companies in two of the states. Gas companies are controlled by commissions in 40 states, water companies in 39 states, street railways in 40 states, and telephone and telegraph companies in 44 states. Only about two-thirds of the states have granted their commissions the authority to prescribe a uniform system of accounting for public utilities, and yet, without something of this sort, it is almost impossible to determine the facts needed for valuation and rate-making purposes. In only one-half of the states do the commissions supervise the issuance of securities by utilities, and in fewer still do they exercise any real control over the uses made of the funds derived from the sale of securities.

Members of the commissions are elected by popular vote in 16 states, although it would seem that positions requiring so high a degree of technical knowledge might better be filled by appointment. The commissions themselves are made up of three members each in 36 states, and consequently are often too small for effective work. In a few cases the functions of commissions are not clearly defined in the state laws, and many commissions are handicapped by reason of insufficient funds. In 1929, for example, total state expenditures for the regulation of both public utilities and railroads amounted to only \$7,200,000.² Despite these weaknesses, the commissions have done much by way of setting up standards of service and safety for the utilities, although, as was previously stated, they have not been especially successful with respect to valuation and rate-making.

Interstate Public Utility Activity. Two recent developments in the public utility field have conspired to make state regulation of the industry less effective than formerly. Many years ago, the business of the public utility was almost entirely local in character, but at present the services of a utility are often sold, at least in part, in other states than the one in which the company is located. Electric power is the public utility product which enters most largely into interstate commerce. This interstate business has created a curious "no man's land" of regulation. The Supreme Court has held that state commissions have no power to regulate rates or other matters in the case of electric power sold at wholesale by a company in one state to a company in another state for distribution in the latter. However, when a company in one state sells a public utility service directly to consumers in other states, the Court has ruled that such business may be regulated by the states unless and until the federal government

² The statistics on public utility commissions are from C. M. Clay, *The Regulation of Public Utilities*, New York, Henry Holt & Company, Inc., 1932, pp. 144-149; and C. W. Thompson and W. R. Smith, *Public Utility Economics*, New York, McGraw-Hill Book Company, Inc., 1941, pp. 197-206.

itself attempts regulation. These interstate activities of public utility companies are pretty clearly a part of interstate commerce and subject to federal control, but they are a complicating factor in state regulation.

The Development of Holding Companies. Another factor which has arisen to hamper state regulation of public utilities is the development of holding companies. Holding companies, as we shall see, may exert a tremendous influence for good or evil in the public utility field, but they are scarcely amenable to state control. They are connected with the public utility industry only through owning, directly or indirectly, a controlling interest in the stocks of actual public utility operating companies. Since they produce no utility services themselves, they do not come under the jurisdiction of public utility commissions; and since many of them operate in two or more states, they have not been readily controlled by the individual states. The problem of the holding companies has become so important that in 1935 the federal government made an attempt to control them and their activities. Before considering this attempt at federal control, we must look into the organization and practices of these companies.

HOLDING COMPANIES

The Nature of Public Utility Holding Companies. Any company which holds the stock of other concerns may be called a holding company, but the term is usually reserved for companies that own a controlling interest in the stock of other companies and actively direct the affairs of these corporations. In the public utility field, a "first-degree" holding company is a corporation that owns a controlling interest in the stock of one or more operating utilities (those which really produce and sell electricity or some other service to the public) and that directs the business activities of the operating company or companies. A "second-degree" holding company will own a controlling interest in the stock of one or more "first-degree" holding companies, each with a group of operating companies under its control. Similarly, there may be holding companies of "third degree," "fourth degree," and so on. Holding companies, of course, are not limited to the public utility field. They exist in many of our major industries, but the problems which they present are probably of greatest significance in the field of public utilities, and it is primarily in this field that holding companies above the first degree are found.

The Financial Functions of Holding Companies. The champions of holding companies in the public utility field claim that many advantages result from the operation of these corporations. A principal function of holding companies is to furnish capital to operating companies. Public utilities require a heavy investment in fixed capital, and much new capital is needed from time to time for extensions and improvements. Public utilities in towns and small cities have often secured from local sources

the funds with which to start in business, but they have often found it difficult to raise funds for extensions and improvements. They have been in a poor position to appeal to investment bankers for funds to be obtained through the issuance of securities, because they were small and unknown and lacked diversity of resources. In this connection, holding companies have been of assistance. They have accepted the securities of the small operating companies in exchange for needed funds, later recovering their outlay by marketing their own security issues, which were readily salable because the holding companies were comparatively large and well known and possessed resources (through the operating companies) which were well diversified in both character and location. Even when the security market has not seemed to be in condition to absorb new securities, the operating companies have often obtained funds from their holding companies, by direct loans. Through the operation of holding companies, the individual operating companies are able to secure capital on better terms than those on which they could secure it for themselves. It is claimed that such financial support has helped to improve the quality and reliability of service in small communities, and to replace small, inefficient plants with large, modern generating stations.

Other Holding Company Functions. Another benefit credited to the holding company is its ability to save money for its operating companies by acting as their purchasing agent. By purchasing at one time machinery, equipment, materials, and supplies for a number of operating companies, the holding company can buy in very large lots and obtain, in addition to lower prices, such advantages as better service, quicker delivery, and a prompter and more satisfactory adjustment of claims than the individual operating companies. Again, the holding company with a number of operating companies under its wing, can afford to have a department or a subsidiary company to provide the operating companies with expert construction and engineering service at a price lower than the operating companies would have to pay outside concerns. The holding company can also give its small operating companies the benefit of high-class managerial ability and the experience which would otherwise be available only to the largest companies. Finally, it is often possible for holding company organizations to supply service to farms, and to small communities which could not themselves support public utilities.

It would seem that, if there were no offsetting disadvantages, the holding company would be the fairy godmother of the public utility industry, transforming, as by a wave of the wand, inefficient, high-cost operating companies into efficient, low-cost enterprises, and furnishing managerial and other services, materials, supplies, and capital to the operating companies on most reasonable terms. Without the holding company, it might be argued, many of our public utilities would be unable to operate, or could continue in business only by charging higher rates than at present.

Why should anyone want to destroy or regulate so useful an organization? But there is, unfortunately, another side to the picture.

The Pyramiding of Holding Companies. If operating companies may enjoy these several benefits through the device of the holding company, it would seem that most of these advantages could be realized through the assistance rendered by a first-degree, or at most by a second-degree, holding company. But our holding company systems have not stopped at the second degree. Many of them have had at the top a holding company which was several times removed from the operating companies in its fields. According to a well-known writer on financial organization:

Out in Oregon, you find a little company called the Yawhill Electric Company. It belongs to the Portland General Electric Company. But the Portland Company belongs to the Pacific Northwest Public Service Company. This might be thought to be the parent organization. It controls the public utilities of Portland, the gas company in Seattle, and street railways and other utility companies in various towns. But this is not the end of the maze. The last-named company belongs to the Central Public *Service* Corporation, which owns other utility systems in Delaware, Maryland, and Virginia. And that in turn belongs to the Central Public *Utility* Corporation, which owns various other holding companies, with utilities and other sorts of enterprises from Maine to Oregon.

But this is still not the end. The Central Public *Utility* Corporation is held by a super-holding company called the Central Public *Service Company*. Why the little Yawhill Electric Company in Oregon, the Tri-City Gas Company in Alabama, the Bridgewater Electric Company in Maine, and the Lower St. Lawrence Power Company in the Province of Quebec, plus a maze of companies (including the Compagnie d'Éclairage Electrique in Haiti) in a dozen or more states, should all be huddled in this same holding company nest, no one can explain. And the interests which support these weird structures are powerful. Nothing short of action by the federal government, and plenary power in the agencies entrusted with the job, can clean up such situations.³

This should not be considered an exceptional case, for it is asserted that, in some public utility systems, the top holding company has been ten to fourteen stages removed from the actual operating companies. As to geographical distribution, it is well known that the Electric Bond and Share Company had operating companies in 36 states, and that each of eight other utility systems had operating units in from 11 to 29 states. While such complicated and widespread systems may not be justified from the point of view of the operating companies or the public, it is clear why the holding companies themselves desire to build up these complicated systems.

Power and Profits. The reason is this: As holding company is piled upon holding company, power and profits become increasingly concen-

³ J. T. Flynn and P. H. Gadsden, "The Holding Company Bill," *Forum and Century*, May, 1935, pp. 259-265.

trated in the hands of the few men who control the topmost holding company. The point may be illustrated by the following hypothetical example given by the Federal Trade Commission:

Suppose there are 100 local power companies, the aggregate total investment in which is \$1,000,000,000, each owned and operated by a separate corporation. The total investment might have been raised by the sale in the aggregate of \$200,000,000 of common stock, \$200,000,000 of 7 per cent cumulative preferred stock, and \$600,000,000 of 6 per cent bonds. If these companies are permitted by public authorities to earn 8 per cent on the total investment, or \$80,000,000 annually, of this, \$36,000,000 would be required to pay the bond interest and \$14,000,000 as dividends on the preferred stock. This leaves \$30,000,000 for the common stockholders, either to draw as dividends or to use in further expansion of the business. This amounts to 15 per cent on the common stock investment and has been made possible out of the 8 per cent earned on the total investment only because the major portion of the total invested funds was furnished by two classes of investors whose per cent of return is limited.

Suppose, however, a particular group of promoters would like to make more than 15 per cent from these power company investments, and for this purpose forms a holding company with a total capital of \$200,000,000 (the amount of the common voting stock of the operating companies), consisting of \$100,000,000 of 6 per cent collateral trust bonds or 6 per cent debentures, \$50,000,000 of 7 per cent cumulative preferred stock, and \$50,000,000 of common stock. This group may be able to furnish the common stock money and persuade others to furnish the bond and preferred stock money, or, furnishing the common stock money, they may persuade the holders of the common stock of the local operating companies to exchange those stocks for this cash, together with the collateral trust bonds and preferred stocks. Now the \$30,000,000 earned by the local operating companies on their common stock equities would accrue to the holding company. Out of it \$6,000,000 would go as interest on the bonds and \$3,500,000 would go as preferred dividends. This would leave \$20,500,000 for the group of promoters who hold the common stock of the holding company, which amounts to 41 per cent on their investment of \$50,000,000.

This group, however, might not be satisfied with this arrangement, or it might not have as much as \$50,000,000 to invest. Suppose, therefore, that, instead of providing one holding company, it provides ten, dividing the local operating companies among them, the aggregate capital of the ten companies being the same as in the preceding case and of the same proportional structure in common stocks, preferred stocks, and bonds. Now suppose that the promoters organize a super-holding company with a total capital of \$50,000,000 (the amount of the common stock of the ten subsidiary holding companies) consisting of \$25,000,000 of 6 per cent bonds, \$12,500,000 of 7 per cent cumulative preferred stock, and \$12,500,000 of common stock. The promoters furnish the common stock money, thereby retaining for themselves the entire voting power in the whole pyramid of companies and constituting themselves the ultimate beneficiaries of the group's earning power, and sell the other securities to the investing public. The \$20,500,000 of income left after paying interest and dividends on the bonds and preferred stocks of the operating companies and of the subsidiary holding com-

panies accrues to this super-holding company. Out of it, \$1,500,000 is required for interest on the super-holding company's bonds and \$875,000 for dividends on its preferred stock. This leaves \$18,125,000 for the common stockholders, or 145 per cent per year on the investment of \$12,500,000 made by these promoters.⁴

This illustration shows that a small group of promoters, by investing \$12,500,000, could gain control of \$1,000,000,000 worth of operating companies, and receive their money back $1\frac{1}{2}$ times each year—and the topmost holding company in this example is only of the second degree! By controlling more operating companies and carrying the holding company structure to greater heights, even better results could be obtained. Moreover, this illustration assumes that each successive holding company has acquired *all* the common stocks of lower companies, which would not be necessary for purposes of control. It also counts as profits of the topmost company only the income received indirectly from the operating companies' earnings. But holding companies also make profits from fees charged for various kinds of services performed for the operating companies. All in all, it is evident that the operations of holding companies may be very profitable to the "insiders."

The Duping of Investors. The above description suggests that when the business is profitable, the small group of common stockholders of the topmost holding company is in a position to get most of the cream. And, when the business is unprofitable, most of the loss is borne by the holders of the other securities, since they have furnished most of the invested funds. In this connection, it should be noted that holding companies have sometimes been guilty of unloading very poor securities on investors. A first-degree holding company holds as its principal assets the common stock of the operating companies which it controls. It has, then, a claim, partial or complete, on the residual earnings of these companies. On the basis of this stock, however, the holding company often sells one or more issues of bonds and possibly three or four issues of preferred stock, while retaining control in the hands of a small number of persons through ownership of the common stock, or such part of it as has voting power. The holding company may pay exorbitant prices for the stock of operating companies and then proceed to sell an amount of its own securities which is far in excess of the real value of the securities which it owns.

While there may be justification for the issuance of bonds by a first-degree holding company, the fact remains that, as bonds are issued by holding companies further and further removed from the operating companies, these "bonds" become distinctly less secure than the common stock of many industries. The same is true, and to an even greater extent, of the preferred stock of high-degree holding companies. Take, for example,

⁴ Senate Document Number 213, 68th Congress, 2nd Session, pp. 173, 174, cited in C. D. Thompson, *Confessions of the Power Trust*, pp. 181-183.

the case of a holding company of the fifth degree. Its assets consist largely of the stock of other holding companies. This stock represents a partial, residual claim, four times removed, on the residual earnings of the operating companies in the system. However attenuated this claim might seem to us to be, the fifth-degree holding company would often, upon the strength of this claim, issue securities which they called bonds, but which lacked almost wholly the certainty as to principal and interest which used to attach to securities bearing this name.

We see, then, that holding companies have sometimes issued securities, on the basis of fictitious asset values and paper profits resulting from stock dividends and other intercompany transactions, which did not truly represent the sums invested in underlying utility properties. These securities, issued merely on the hope of excessive income from subsidiaries, were likely to bring losses to investors. As one public utility company executive put it, "I know of no more reprehensible abuse than for speculators to buy up companies for high prices, put them into a holding company, and then, by trading on the credulity of the investing public relative to claimed increases in economy, to unload the holding company's securities at advanced prices and thus get completely out from under before the bubble is punctured, leaving the unfortunate final investor to face an angry consumer."⁵

Evils of Intercompany Relationships. Sometimes a holding company system has been so large that the top holding company, in addition to selling bonds and preferred stock, has had to sell part of its common stock to the public, leaving only enough in the hands of the insiders to enable them to control the system. In instances of this kind, the large profits left after paying bondholders and preferred stockholders, when business was good, had to be shared with these outside common stockholders. In such cases, but more particularly when the income arising from the subsidiary companies, though sufficient to pay bondholders and preferred stockholders, was not sufficient to pay large returns on common stock, those in control of the topmost company have sometimes found it desirable to tap the income of subsidiary companies at its source. This might be done in any of a number of ways.

Those in charge of the topmost holding company control the affairs of the subsidiary holding companies and the operating companies as well. They have the power to appoint, directly or indirectly, presidents and managers for the operating companies and determine their salaries. Often they have appointed themselves or their associates as officials of the subsidiary companies, at very choice salaries and occasionally with generous arrangements for pensions in their old age. Funds for these purposes came,

⁵ Samuel Ferguson, President of the Hartford Electric Company, in the *Electrical World*, March 20, 1926.

of course, from the payments made by consumers for the services of the operating utility companies.

Moreover, the men in control of the highest holding company often owned other companies which sold machinery, equipment, materials, and supplies, of the types required by the operating companies, or sold construction and engineering services. Hence, they were able to sell the operating companies commodities and services at virtually whatever prices they chose to charge. If, for example, the manager of a small electric company needed (say) a new dynamo for his plant, he would submit the matter to the manager of a holding company in another place. The holding company manager would tell him whether he could have the money for the operating company, how much he could have, just what he should buy with it, from whom he should make the purchase, and what price he should pay. This would often result in the equipment being purchased from a company owned by the men at the top, and at a price which they themselves fixed. If this company charged the local operating company too much for the equipment, nobody but the insiders would be any the wiser.

In these and other ways, those in control of a holding company system could often find ways to line their pockets without sharing the income of subsidiary companies with other people. The practice of charging exorbitant prices to operating companies for machinery and equipment was important not only from the point of view of "milking" the operating companies, but also because the rates the operating companies were allowed to charge were usually determined by public utility commissions on the basis of permitting these companies to earn a fair rate of return on the cost of the property of the companies used and useful in the public service. Hence, the rates paid by consumers might be unduly high because of the high prices paid by operating companies for equipment. Finally, it will be recollected that a major claim for the holding company is that it makes it possible for the operating companies to obtain capital which they themselves might not have been able to attract. However, this process has sometimes been reversed and the operating companies have been compelled, to their detriment, to make "upstream loans" to their holding companies.

Propaganda and the Control of Legislation. We must mention, also, as an evil related to holding companies, the extent to which these corporations have attempted to influence legislation in which they were interested. It was perhaps but natural that holding companies, in a country in which other large concerns or industries indulge in such practices, would try to influence legislation through lobbying, bribery, and other methods. These methods, however, were quite as likely to be used against legislation designed to correct evils of the holding company as in favor of that proposed for the benefit of holding companies and

operating companies alike. When the Holding Company Bill was before Congress in 1935, many holding companies spent large sums of money to defeat this measure. The funds were sometimes obtained through "contributions" made by the operating companies, or, again, came out of income received from operating companies in the regular course of business. In effect, then, the purchasers of utility services were paying to defeat a law intended, in part at least, to protect their interests as consumers. In addition to direct lobbying, the holding companies sought to induce security holders to write or telegraph their Senators and Congressmen urging the defeat of the bill. It was testified at a public hearing that public utility officials sent many identical telegrams denouncing this bill, signing them with names taken at random from telephone directories, and without the authorization of those whose names were used.

It has also been charged, and at least partly proved, that holding companies have conducted long and expensive campaigns of propaganda to influence public opinion in their favor. At times newspapers have been bought outright to insure favorable publicity for the industry. More often such publicity has been obtained through cordial relations established by heavy advertising in these newspapers. There is some evidence that college professors have been kept on public utility payrolls so that they might preach the gospel of the utilities; and the industry has also been successful in changing the content of some textbooks and inducing school authorities not to use others which contained unfavorable references to the industry. Utility companies have also been most generous in providing favorable materials about the industry for use in the schools.

The Question of Rates. Prominent utility officials have often contended that, whatever might be the evils of holding companies, the rates charged by operating companies to the consumers have not been adversely affected by holding company control. Since the operating companies are only allowed to charge rates which will produce a fair return upon a fair valuation of their properties, it is said to matter little to the consumers how thoroughly watered the securities of holding companies may be, or what happens to the income of operating companies once it is received. Indeed, these officials have contended that the progressive reductions which have taken place in public utility rates indicate the benefits to consumers of utility operation under the holding company system. There may be question as to how general these reductions have been, but there is no doubt that they have occurred in some cases. However, those which have occurred in some years must be discounted to a considerable extent as having possibly been produced by the threat of holding-company regulation, rather than by lowered costs.

In any case, the lowering of absolute rates means comparatively little. That is, the low rates charged today may be further above the cost of production than were the higher rates charged in previous periods. The

dealings of holding companies with their operating companies have been secret, and we have had no way of knowing whether the price paid for (say) electricity in a given community was, on the basis of costs or by comparison with the rates charged elsewhere by other operating companies under the same holding company control, a fair price.

We have now reviewed briefly the principal merits attributed to public utility holding companies, as well as the principal evils with which they are charged, and are in a position to examine and appraise the public utility legislation of 1935. At this point it is only fair to say that the evils pointed out have by no means been characteristic of all public utility holding companies. Some, indeed, have enviable records for fair dealing with both their subsidiaries and the public, but others have been guilty of most, if not all, of the malodorous practices that we have described.

THE WHEELER-RAYBURN PUBLIC UTILITIES ACT

The holding company situation in the public utility field was so serious, and the powers of the state governments to control these companies were so feeble, that in 1935 the federal government undertook to provide regulation through the Wheeler-Rayburn Public Utilities Act. This Act was in two parts: Title One or the Public Utility Holding Company Act, and Title Two or the Federal Power Act. In Title One, a holding company was defined as any company which has, directly or indirectly, 10 per cent or more of the voting control of a public utility company or another holding company. Holding companies were brought under the jurisdiction of the Securities and Exchange Commission, the provision being that every holding company which, on October 1, 1935, had outstanding securities offered since 1925 and owned to some extent in other states, must register with the Commission in order to remain in business. The Commission was empowered to exempt certain companies from registration under conditions too detailed to be described here. To secure registration, holding companies must produce full and complete information about their capital, resources, officers, and business. Periodic and special reports must be filed with the Commission.

Financial Matters. Several provisions of the Act are designed to correct specific evils that have marked the development and operation of holding companies. A uniform accounting system is prescribed for registered holding companies, and it is unlawful for any registered holding company or subsidiary company to acquire securities or capital assets of other companies without the approval of the S.E.C. The issuance of new securities by holding companies also comes under the jurisdiction of the Commission. Security issues must be well adapted to the financial structure of the issuing company and to its earning power; the financing must be necessary and appropriate to the economical and efficient operation of the business; fees and commissions in connection with the security issues must

be reasonable; in cases of guaranty or assumption, the risk must not be improper; and the terms of sale must not be detrimental to the interests of the public, investors, or consumers. The purposes of security issues must be approved by the S.E.C. No-par stock, preference stocks, and debentures may no longer be issued.

Holding companies and subsidiaries may not declare or pay dividends in violation of such rules as the S.E.C. may prescribe to protect the financial integrity of the system, safeguard working capital, or prevent payments out of capital or unearned surplus. The acquisition or redemption, by a holding company, of its own securities, the sale of its own securities or other utility assets, and the solicitation of proxies, powers of attorney, and the like, are prohibited except under rules set up by the S.E.C. Holding companies are forbidden to sell securities from door to door, and to require subsidiaries to sell holding company securities. "Upstream loans," from operating companies to holding companies, are prohibited and other loans are regulated.

Contributions of holding companies or subsidiaries to any political party or candidate are strictly prohibited. Utility lobbyists must register with the S.E.C., and disclose the subject matter on which they work, the fees they receive, and other specified information. Officers and directors of holding companies must file statements listing the securities of the holding companies and subsidiaries owned by them, and must make monthly reports of any changes in ownership. To prevent the misuse of inside information, profits realized by officers and directors from buying and selling such securities within any six-month period shall inure to, and be recoverable by, the companies, regardless of the intent of the officers and directors.

Other Intercompany Relations. Holding companies are no longer permitted to sell to operating companies directly, or through a subsidiary company, the various types of commodities and services which we have mentioned, at whatever prices they choose to set. On April 1, 1936, it became illegal for a registered holding company to enter into or perform any service, sales, or construction contract for an associated public utility company or mutual service company. A subsidiary of a registered holding company or a mutual service company may do these things only in accordance with the rules, regulations, and orders of the S.E.C., to insure that the contracts are performed at cost and that the burden of cost is fairly divided among the associated companies. Again, on August 26, 1936, it became illegal for a registered holding company or subsidiary to have, as an officer or director, any officer, partner, or representative of a bank, trust company, investment banking house, banking association, or firm, or of any corporation a majority of whose voting stock was owned by any bank, trust company, investment banker, banking association, or firm, except as the S.E.C. might permit.

The Act attempts to confine the activities of holding companies to the operation of gas and electric utilities and the holding of securities of such utilities. It is intended to prevent the indiscriminate combination of domestic and foreign utilities, and to prevent the use of the holding company to deny to the public the widespread and economical use of both natural gas and electrical energy, which are sometimes withheld merely because it is to the selfish advantage of a company to encourage the use of one of its products rather than another and deprive the public of the benefits of competition between the two.

The "Death Sentence" Clause. The most famous provision of the Holding Company Act was the one containing the so-called "death sentence" for public utility holding companies. This clause directed the S.E.C., after January 1, 1938, to require by order that existing utility holding company systems be limited to one such company, and one subsidiary holding company, and to prevent control by the two companies over more than one integrated system of operating companies. Thus, the "death sentence" applies to holding companies above the second degree. According to the Act, an integrated system of operating companies is a system of one or more units of generating plants, and/or transmission lines and/or distributing facilities, whose utility assets, whether owned by one or more companies, are physically interconnected or capable of physical interconnection, and which under normal conditions may be economically operated as a single interconnected and coordinated system, confined in its operation to a single area or region, in one or more states, and not so large as to impair (considering the state of the arts and the area or region affected) the advantages of localized management, efficient operation, and the effectiveness of regulation.

No exceptions are permitted as to the degree of the holding companies, but exceptions may be allowed in the number of operating systems to be controlled by the two holding companies in a system. Thus, more than one integrated operating system may be controlled whenever the Commission finds that such additional systems are incapable of economic independent operation, or operation without the loss of substantial economies not otherwise obtainable, when the additional systems are located in the same state or adjoining states, and when the continued combination of the operating systems is not so large as to impair the advantages of localized management, efficient operation, or the effectiveness of regulation. The burden of proof in each case is on the holding company.

The Welfare of Operating Companies and Consumers. In general, the regulatory provisions of the Act were directed at specific and well-known evils. The powers given the S.E.C. differed little from those already exercised by some public utility commissions. The Act has met with fairly general approval, though public utility officials feel that some of its provisions are too severe and delegate too sweeping powers to the S.E.C.

However, the "death sentence" clause was attacked from several angles, one of which related to the welfare of the operating companies and of the consumers. It was said that the destruction of the holding companies would ruin the industry because the operating companies were dependent upon the holding companies for expert managerial services, supplies, equipment, and capital. With the holding companies gone, the operating companies would have to depend upon their own resources and would be unable to operate with their customary efficiency. The result would be higher rates for consumers, or perhaps even the outright failure of operating companies and a growing need for government ownership. Indeed, it was sometimes charged that the aim of the Act was eventually to bring all public utilities under government ownership.

Supporters of the Act did not deny that many operating companies were dependent upon holding companies for capital, services, and commodities, and that the efficiency of these operating companies would be impaired if all holding companies were eliminated. They pointed out, however, that not all holding companies, but only those above the second degree, were to be dissolved. It is probable that operating companies already derived a major part of their benefits from holding companies of the first or second degree. Even if this was not true at the time, there seemed to be no reason why first- and second-degree holding companies should not be able, after a reasonable period of time, to furnish all essential capital, commodities, and services to the operating companies. If this development took place, holding companies above the second degree would perform no useful economic function, and their dissolution would not involve loss to the operating companies and consumers. According to William O. Douglas, former chairman of the S.E.C.: "To the extent that the holding company can justify its dominion in terms of service to the operating companies, the statute is not a 'death sentence.' On the contrary, it holds the promise of a long life and a happy one."⁶

Even though the holding companies of high degree may not be missed, it might be uneconomical to deprive a first- or second-degree holding company of all but one of its integrated systems of operating companies. But, as we have seen, a holding company may be permitted to continue its control over more than one system of operating companies, whenever such control is in the public interest. In other cases, holding companies must be reorganized, or new holding companies organized, so that only one system of operating companies will be controlled by each. Given a reasonable period of time, it should be possible to accomplish the necessary reorganization with a minimum of loss to those involved.

The Destruction of Investments. There were also many critics of the Act who contended that, while the dissolution of high-degree holding companies might be good riddance from the point of view of operating

⁶ *Electrical World*, May 14, 1938, p. 1604.

efficiency and consumer rates, their loss would be mourned by people who had invested in their securities. It was argued that the government, by forcing the liquidation of these companies, would destroy the investments of their preferred and common stockholders, if not those of the bondholders. Let us suppose that a third-degree holding company was forced to liquidate. This would mean disposing of its holdings of securities of other companies, and selling its other assets. Out of the proceeds thus realized, the company would first have to pay its bondholders in full, if possible, and there might be little or nothing left for the stockholders.

Supporters of the Act admitted that the investors in certain holding company securities were deserving of sympathy, for undoubtedly some of these "investments" had already lost their value completely, or almost completely. They contended, however, that the government was in no sense responsible for these losses to security holders. Rather, the responsibility rested with the holding company executives who had sold worthless or questionable securities at high prices in the gala days of 1929 and earlier. The solicitude of these executives for the security holders was touching, but untimely.

It seems apparent that many high-degree holding company securities had lost most if not all of their value before the Act was passed or was in any danger of passing. For example, shares of American Gas and Electric sold in 1929 for as much as \$225 per share and fell to \$187½, and shares in Associated Gas and Electric, which had brought \$46, were later offered at 39 cents each. Of course, as utility executives claim, not all holding companies should be blamed for the misdeeds of the guilty, but in 1929 the control of about 40 per cent of the power industry was concentrated in the hands of three large groups—the Insull group, United Corporation, and Electric Bond and Share. The stock of these companies sold in 1929 for as much as \$79, \$75, and \$189, respectively, and during the depression went as low as 0, \$1½, and \$3⅝ per share, respectively.

Since the shares of many holding companies had dropped, before holding company legislation became at all imminent, to a figure which was only one to 5 per cent of their former values, the advocates of the law suggested that something more than the prospect of adverse legislation had depressed their values. They suggested also that the holding company officials, who were weeping bitterly over the prospective fate of the utility investor at the hands of a cruel government, might be shedding crocodile tears. The man who bought the stock of a high-degree holding company at \$75 a share, and watched it fall to \$1.50 under a governmental policy of "hands off," was not likely to be greatly impressed by the charge that the government, through the operation of the Public Utilities Act, was about to destroy the value of his shares.

Let us see how the Act is likely to affect the owners of securities. If we are correct in assuming that, after a period of reorganization, all holding company functions contributing to the efficiency of operating companies can be performed by first- and second-degree holding companies, those who hold the securities of the operating companies should not suffer through the operation of the Utilities Act. Similarly, the holders of the securities of first- and second-degree holding companies should not be affected adversely, since those which are sound and perform a useful economic function will not be dissolved.

We may agree that the holders of stock in high-degree holding companies are in an unfortunate position, while denying vigorously that this situation is attributable to the Utilities Act. Rather, the losses that the stockholders suffer will have resulted chiefly from the fact that they were inveigled into paying very high prices for stock which was essentially and inherently unsound. In other words, they were sold securities whose total price was far in excess of the value then existing or probable future value of the assets of the high-degree holding companies whose stock they bought. The Utilities Act must indeed be embarrassing to the gentlemen who foisted these securities on the public, but such embarrassment scarcely constitutes a valid criticism of the Act.

Enforcement of the Public Utilities Act. The constitutionality of the Act was strongly challenged in the courts. When the time came for holding companies to register with the S.E.C., many refused to do so until the constitutionality of the Act had been determined. In February, 1938, it was estimated that holding companies controlling 56 per cent of the assets of utility companies subject to federal regulation had failed to register.⁷ In March, 1938, the Supreme Court ruled that the registration provisions of the Act were constitutional. The Court held that the holding company involved in the suit in question was clearly, though to some extent indirectly, engaged in interstate commerce, and that, equally clearly, the registration provisions of the Act came within the power of Congress to regulate interstate commerce.

Following this decision, several important holding companies hastened to register, but the constitutionality of the "death sentence" feature of the Act remained in doubt. This part of the Act was to be enforced as soon as possible after January 1, 1938, but the S.E.C. delayed its enforcement because of the uncertain status of the Act. In August, 1938, the S.E.C. set December 1, 1938, as the final date for the submission of reorganization proposals by all companies under the "death sentence" clause. On that date, the Commission announced that public utility holding companies representing "substantially 100 per cent" of the assets of the industry had furnished it with plans for simplifying their corporate structures, as required by the Act.

⁷ *The Chicago Tribune*, February 25, 1938.

By June 30, 1945, considerable progress had been made in carrying out the "death sentence" clause. A total of 146 plans for simplifying the corporate structures of public utility holding companies had been filed with the Commission. Of these, the Commission had approved 56, frequently after securing necessary modifications; 23 had been withdrawn or dismissed; 3 had been denied; and 64 were pending in various stages of completion.⁸ Public utility holding companies had already divested themselves of 342 electric, gas, and other companies with total assets of \$4,347,000,000; and integration orders outstanding required the divestment of holding companies' non-retainable interests in 147 subsidiary companies having aggregate assets of \$4,352,000,000.⁹ The Commission had issued 46 orders involving simplification of corporate structures and equitable redistribution of voting power, and there were 47 such proceedings pending.¹⁰ Altogether there were 63 cases pending as of June 30, 1945, involving 33 holding company systems, 92 holding companies, 768 operating companies, and aggregate assets of \$13,601,872,095.¹¹

Finally, the United States Supreme Court reached a decision on April 1, 1946, which declared the "death sentence" clause to be constitutional. The decision was written in a case involving the North American Company, which was the top holding company in a system containing 80 operating companies in seventeen states and the District of Columbia, and which had been ordered to confine its operations to a single integrated system built around the Union Electric Company of Missouri. The North American Company had contended that the ownership of securities is not in itself interstate commerce and hence could not be made the basis of federal legislation. The Supreme Court replied that Congress could protect the freedom of interstate commerce by any means that were appropriate, lawful, and not prohibited by the Constitution, and that previous decisions of the Court had recognized that Congress could deal with and affect the ownership of securities in order to insure the freedom of commerce. The North American Company had also contended that the "death sentence" clause was unconstitutional, as applied to the company, since none of the evils that led Congress to enact the statute was actually present in the affairs of this company. However, the Supreme Court replied that, if evils had disclosed themselves which entitled Congress to act as it did, the Congress had power to legislate generally, unlimited by proof of the existence of the evils in each particular situation. With the question of constitutionality out of the way, the reorganization and adjustment of holding companies in conformity with the "death sentence" clause proceeded briskly in 1946 and 1947.

⁸ *Eleventh Annual Report of the Securities and Exchange Commission*, Philadelphia, 1946, p. 36.

⁹ *Ibid.*, pp. 35, 37.

¹⁰ *Ibid.*, p. 35.

¹¹ *Ibid.*, p. 36.

The Federal Power Commission. Title Two of the Public Utilities Act of 1935 gave important powers to the Federal Power Commission. This body had been created in 1920 by the Federal Water Power Act. In the first fifteen years of its life, its activities were limited to licensing water-power projects for electrical development, regulating the accounting of such projects to prevent overcapitalization, and making power and electric rate surveys. The Act of 1935 gave the Commission regulatory powers over all facilities used for the transmission and sale of electric energy in interstate commerce, and over the sale of electric energy at wholesale in interstate commerce. The Commission was directed to divide the country into regional power districts, and to encourage interconnection and coordination of facilities within each district and between districts. Upon application of any state commission or person engaged in the transmission of electric energy, the Commission may direct a public utility (if it finds that no undue burden is thereby placed upon the utility) to connect its electric transmission facilities with those of one or more persons engaged in the transmission or sale of electrical energy, and to sell energy to or exchange energy with such persons. However, the Commission may not require the extension of generating facilities for these purposes or compel any utility company to exchange or sell energy when to do so would interfere with its ability to provide satisfactory service to its regular customers.

In case of war or a shortage of electric power or facilities, the Commission may, upon its own motion or by request, compel a temporary connection of facilities and such generation, exchange, or transmission of power as in its judgment will best provide for the emergency and care for the public interest. For interstate purposes, the Commission has powers of control over electric utility companies similar to the powers of the S.E.C. over holding companies. That is, it controls interstate wholesale electric rates, the acquisition and sale of properties, the issuance of securities, and accounting methods. This part of the Public Utilities Act of 1935 aims to correct a weakness in the state public utility regulatory systems. In 1938, the Flood Control Act gave the Commission considerable authority in planning electric power developments at flood control dams, and in the same year the Natural Gas Act directed the Commission to regulate the transportation and sale of natural gas in interstate commerce.

THE TENNESSEE VALLEY AUTHORITY

The Nature of the T.V.A. The public utility industry, in addition to its worries over the Public Utilities Act, has been much concerned about governmental competition in the production and sale of electric power. While the federal government has been building dams and facili-

ties for the production of electric power in many parts of the country, the chief concern of the industry has been the activities of the Tennessee Valley Authority. The T.V.A. is a corporation controlled by a board of three directors appointed by the President. It was organized in 1933, for the purpose of developing the Tennessee River Valley area. In 1934, when the T.V.A. project included six dams, with electric plants and transmission lines, it was estimated that the total cost would be \$310,000,000. By 1947, however, the project had expanded greatly and the total proprietary interest of the United States in the T.V.A. (including funded debt, direct appropriations, and transfers from the War Department) amounted to \$763,000,000.¹²

The public utility industry is interested in the T.V.A. because all the dams that are constructed are equipped to produce electric power, which is sold in competition with the electricity sold by the privately owned utility companies. For example, the T.V.A. claimed a net income of over \$16,000,000 from sales of electric power in 1946.¹³ It is frequently contended that the primary purpose of the T.V.A. is to produce and sell electric power. According to T.V.A. authorities, however, this is but one purpose among many. Other interests are flood control, the improvement of navigation, the production of fertilizer and explosives, and the rehabilitation of agriculture. So far as electric power is produced, it has been held that the T.V.A. power plants are used as "yardsticks" to determine how cheaply electric power can be produced and transmitted, and in this way to find out whether existing rates in the district are fair and reasonable. It is also suggested that, though private companies have had to lower their rates for electricity because of T.V.A. activities, consumption has been increased so greatly that these companies now make larger net earnings than in the past.

Criticisms of the T.V.A. The critics of the T.V.A. assert that the project is designed almost solely for the production and sale of electricity in competition with the output of private companies. They point out that the T.V.A. has erected thousands of miles of transmission lines, and that it serves scores of communities and tens of thousands of industrial consumers. They point out, further, that the electric plants of the T.V.A., when completed, will produce about half as much power as is now sold in the seven states affected by the project, and that the T.V.A. has acquired more than \$110,000,000 worth of electrical facilities from private companies.¹⁴ Citing these facts and reports that other projects similar to the T.V.A. are to be started, the critics conclude that the private electrical industry is to be destroyed, and government ownership substituted.

In allocating the costs of the total project among the major objectives

¹² *Public Utilities Fortnightly*, January 30, 1947, p. 172.

¹³ *Ibid.*, p. 173.

¹⁴ C. W. Thompson and W. R. Smith, *Public Utility Economics*, p. 696.

—flood control, navigation, and power production—it has been decided that 59 per cent of the costs should be charged against power facilities.¹⁵ But critics contend that this is an underestimate of the cost of these facilities, and that the dams could have been built for far less if they had not been designed for the production of electric power. To allocate too little cost to the construction of power facilities would be, of course, to lower artificially the cost of power production at the T.V.A.

It is charged that the use of the T.V.A. plants as yardsticks is unfair to the private companies, not only because of an artificially low estimate of original costs, but also because they are unlike the private plants in the extent of industrial and residential use, load factors, taxes, interest, and depreciation charges. For example, it is said that the T.V.A. in 1946 made depreciation charges substantially lower than those of private companies, set aside amounts in lieu of taxes which were about one-fourth of what private companies would have paid, and took no account of interest on government funds, which would have amounted to \$12,920,000 even at the rate of 1.936 per cent which the government was currently paying on the average.¹⁶ To have to compete with T.V.A. rates, in the face of such fundamental differences, places the private companies at a hopeless disadvantage, it is argued. The T.V.A. is also criticized because its operation has deprived federal, state, and local governments of some 4½ million dollars of taxes which used to be paid by public utility companies, and because its power is purchased largely by a few large industrial consumers instead of benefiting the general consuming public of the area.

Accomplishments of the T.V.A. Our criticisms have dealt with the T.V.A. as a producer and marketer of electricity, and we should say at this point that some of the other T.V.A. projects deserve somewhat more favorable comment. The average annual flood damage along the Tennessee River was estimated at \$1,780,000 before the T.V.A. dams were built,¹⁷ and even this figure did not take into account loss of life, disruption of transportation and business, and the diversion of land to low-value uses because of the danger of flooding. The T.V.A. dams permit flood waters to be stored up in great lakes and to be released gradually later on, with the result that flood damage in the area has been largely eliminated. The T.V.A. has also achieved some success in its attempts to improve farming methods in the area and to increase the use of commercial fertilizers. It has demonstrated and advocated changed methods of hillside cultivation, the use of new farming equipment, and the growing of crops that

¹⁵ *Public Utilities Fortnightly*, January 30, 1947, p. 173.

¹⁶ *Ibid.*, p. 173.

¹⁷ Emory Troxel, *Economics of Public Utilities*, New York, Rinehart and Company, Inc., 1947, p. 693.

restore nitrogen to the soil. The farm rehabilitation program has also included the production and distribution of superphosphate.

Other accomplishments claimed for the T.V.A. are more questionable. The consumers of the Tennessee Valley region have benefited directly through lower rates for electricity and indirectly through lower prices of goods produced with the aid of electric power, but we must remember the common charge that these advantages are available to the consumers only because they have been subsidized by the taxpayers of other regions. The T.V.A. provides a nine-foot navigation channel from Knoxville to Paducah, a distance of 650 miles; and water connections with the Mississippi River system, the Ohio River system, and the Illinois waterway are available. However, we do not know whether the volume of traffic on the Tennessee waterway will ever come close to the expectations of the sponsors of the project, whether any transportation benefits which result will be enjoyed in the last analysis by the consumers of commodities or by industrial corporations and the owners of coal mines, or whether transportation on the Tennessee waterway will really be cheap or costly. In the preceding chapter we noted that transportation on inland waterways is often very expensive when all the costs of such transportation are measured and included. Finally, the economic development of the Tennessee Valley region has been desirable, but we can never be certain just how much of it should be credited directly to the T.V.A. or how its cost would compare with that of the development which would have occurred naturally, though somewhat more slowly.

Constitutionality of the T.V.A. In view of these criticisms, it is not surprising that utility companies have objected strenuously to the activities of the T.V.A. Indeed, some eighteen utility companies in the southeastern part of the country brought suit, asking an injunction against the sale of power by the T.V.A., on the ground that their business was threatened with irreparable injury, if not destruction. The case came to a decision in a Federal Court in Chattanooga, Tennessee, in February, 1938. The court decided in favor of the T.V.A., holding that the utility companies have no immunity from lawful competition, even if their business is curtailed or destroyed. The judge decided that the T.V.A. dams were constructed for several other purposes—including navigation, flood control, and national defense—as well as for the development of electricity. The water stored by these dams, when allowed to pass through turbines, creates electric power. This power is the property of the federal government, and the Constitution empowers the government to dispose of its property in any way it may choose. The utility companies immediately took an appeal to the Supreme Court, which refused to reverse the decision of the district court.

1. Why are some businesses called "public utilities"? Explain.
2. Why has it been thought necessary for the government to regulate public utilities?
3. How have our courts restricted the power of public utility commissions to regulate the rates charged by utility companies?
4. Why is the valuation of public utility properties necessary? What problems arise in connection with valuation?
5. What is meant by the prudent investment cost method of valuation? Explain fully.
6. Is either the total par value or the market value of the stock of a utility company a sound measure of the value of its property? Why?
7. What problems are encountered in attempting to find the original cost of a utility company's properties? Explain.
8. Do you prefer reproduction cost or original cost as a method of public utility valuation? Explain.
9. What difficulties arise in attempting to establish a fair rate of return? Explain.
10. Is any principle of rate regulation feasible other than the "fair return on a fair valuation"? Explain.
11. "Despite regulation by public utility commissions, many evils have continued to exist in the public utility industry." Explain the nature of these evils.
12. What have been the principal weaknesses of public utility commissions?
13. How have two developments of fairly recent years still further impaired the ability of state commissions to regulate the utilities?
14. What is a public utility holding company?
15. How do holding companies perform certain financial functions for their operating companies? Explain.
16. What other functions are performed by holding companies for operating companies.
17. What is meant by the pyramiding of holding companies?
18. How are power and profits concentrated in the hands of a few individuals through the use of holding companies? Explain fully.
19. In what ways have holding companies sometimes been guilty of duping investors?
20. How have evils existed in the relations between holding companies and their subsidiaries? Explain.
21. How have holding companies attempted to influence legislation and public opinion?
22. What were the purposes of the Public Utility Holding Company Act of 1935?
23. How is the Securities and Exchange Commission expected to control the financial operations of holding companies under this Act? Explain.
24. How are intercompany relations regulated by the Act?
25. What is meant by the "death sentence" clause?
26. Will the welfare of operating companies and consumers be adversely affected by the enforcement of the "death sentence" clause? Explain.
27. Has the government, through the "death sentence" clause, destroyed the investments of the holders of securities of high-degree holding companies? Explain.

28. To what extent had the "death sentence" clause been enforced up to June 30, 1945?
29. On what grounds did the Supreme Court decide that the "death sentence" clause was constitutional? Explain.
30. Explain the provisions of the Federal Power Act of 1935.
31. What is the T.V.A., and how is it related to the public utility industry?
32. Discuss the controversy which has been raging over the activities of the T.V.A.

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Monopolies

IN MANY INDUSTRIES, THOUGH NOT IN ALL, ECONOMIES MAY BE BROUGHT ABOUT through large-scale production. But even in fields where the economies of large-scale production are great, a single firm may grow to a point beyond which no economies in actual operation of the plant would result from a further increase in size—although greater size might be desirable from the point of view of efficient marketing of the product, economical financing, or bearing the risks of the business. Under such conditions, it often happens that several business plants are brought under one central control, so that all may be managed as a single business unit, though each plant is limited to the size at which it can produce most efficiently.

But the process of centralization of control need not stop here. One firm, or a group of firms, sometimes increases in size until it controls so large a part of the capacity of a whole industry that it can regulate the output of the industry sufficiently to exercise control over the price charged for its product. In such cases, whether the control over productive capacity and price is complete or incomplete, a condition of effective monopoly exists.

Combinations and Monopolies. At the outset of our discussion, we must distinguish carefully between monopolies and ordinary business combinations. A business combination, whether horizontal or vertical, may be formed in any industry without a monopoly resulting, so long as the combination controls only a relatively small part of the total output of the industry. On the other hand, a monopoly situation may arise through the growth of a single firm, or through a trade association of several otherwise independent firms, without any actual combination of business units taking place. It follows that what is true of a combination is not necessarily true of a monopoly. A combination may be a sound and desirable economic development, while a monopoly is neither of these things. Similarly, a business combination may increase its gains by effecting real economies in production rather than by charging exorbitant prices or practicing unfair tactics toward its competitors, but this is not the method used by monopolies.

In referring to a monopoly, therefore, we shall have in mind a person, firm, combination of firms, association of firms, or simple group of firms, which owns or controls a sufficient part of the productive capacity of an

industry or business to enable it to control the price or prices charged by the whole industry or business for its product or products. It is impossible to say exactly what percentage of the productive capacity of an industry must be controlled in order to fix prices, for the percentage would vary considerably from one industry to another; but it is certain that monopoly powers can often be exercised by an organization which controls far less than 100 per cent.

We shall limit our present discussion to industrial monopolies. Public utilities, such as water, gas, and electric companies, were treated in the preceding chapter. These public utilities have long been recognized as "natural monopolies," that is, as businesses which can attain maximum efficiency only if given monopoly control and which, if organized competitively, would eventually turn into monopolies. Hence, public utilities have been permitted to operate as monopolies under governmental control. The railroads, which were also discussed separately, are more like public utilities than like ordinary industrial companies and have been accorded special treatment by the federal government.

THE DEVELOPMENT OF THE MONOPOLY PROBLEM

For many years, the existence of monopoly conditions in an industry usually meant that the field was dominated by a single large firm or by a gigantic formal combination of firms. Though monopolies in this sense existed in the United States as early as the middle of the nineteenth century, the most active period in their organization was from 1887 to 1903. The early monopolies took several forms, some of which we shall describe briefly.

The Pool. One of the earliest types of monopolistic organization was the pool, which consisted of a group of firms combined for certain purposes, although they remained independent in other respects. As to method of operation, pools were of several types. The most common types divided total output, markets, or profits among the member firms according to some prearranged plan. In general, pools were not a very successful type of monopolistic organization. Soon after a pool was formed, the individual members, or some of them, usually succumbed to the temptation to make a little money on the side by violating the pool agreement. This often meant the end of the pool, for the agreement among the firms was not enforceable at common law, since it was an agreement in restraint of trade.

The Trust. Another early form of monopolistic organization was the trustee device, or trust. The stockholders of the combining corporations would assign their stock with voting power to a board of trustees, and receive in return trust certificates representing the value of their properties. By holding a majority of the voting stock of the various com-

panies, the board of trustees could elect the officers of these companies and control them as a unit with respect to production and prices. The board would collect dividends on the securities held in trust, and distribute them among the owners of the trust certificates. The Standard Oil Trust, first organized in 1879, was an outstanding example of the use of the trustee device. This method of organization was attacked in the courts of several states and was declared illegal, both as tending to create monopolies and as representing unauthorized activity on the part of the individual corporations.

The Extent of Early Monopolies. Regardless of types of organization, monopolies of one kind or another controlled some 40 per cent of all manufacturing capital in the United States in 1904. Many of these monopolies were incomplete, some did not last long, and others turned out disastrously from the financial point of view; but in 1904 there were 26 monopolies which controlled 80 per cent or more of the production in their respective fields. The products affected ranged all the way from asphalt, bathtubs, and bicycles, at one end of the alphabet, to tin cans, whiskey, and window glass, at the other. Moreover, there were at least eight concerns which controlled 90 per cent or more of the production of some or all the articles which they produced.¹ These companies were the American Can Company, the American Sugar Refining Company, the American Tobacco Company, the Corn Products Refining Company, the International Harvester Company, the National Cash Register Company, the Standard Oil Company, and the United Shoe Machinery Company. Most of these companies were able to make extremely large earnings on their investments.

Modern Monopolies. Numerous cases of complete, or almost complete, control of industries by single companies have recently been cited. For example, it was said a few years ago that "one company in each field controls all or nearly all, of the nation's supply of aluminum, nickel, molybdenum, magnesium, shoe machinery, glass container machinery, and scientific precision glass, provides nearly all of the domestic telephone service . . . and operates all of the sleeping and parlor cars."² The companies involved were the Aluminum Company of America, the International Nickel Company, the Climax Molybdenum Company, the Dow Chemical Company, the United Shoe Machinery Company, the Hartford-Empire Company, the Bausch and Lomb Optical Company, the American Telephone and Telegraph Company, and the Pullman Company.

In other cases, "pairs" of firms control all or nearly all of the supply of certain economic goods. Examples are the United Fruit Company and the Standard Fruit and Steamship Company in the importation of

¹ Temporary National Economic Committee, Monograph No. 21, *Competition and Monopoly in American Industry*, Washington, Government Printing Office, 1940, p. 65.

² *Ibid.*, p. 69.

bananas; the Pittsburgh Plate Glass Company and the Libbey-Owens-Ford Glass Company in the production of plate glass; the General Electric Company and the Corning Glass Works in the production of glass bulbs, glass tubing, and rod for electric lamps; the General Electric Company and the Westinghouse Electric and Manufacturing Company in the production of metal bases for electric lamps; the International Business Machines Corporation and Remington-Rand, Inc., in the production of electric accounting machines; the Westinghouse Air Brake Company and the New York Air Brake Company in manufacturing railroad air brakes; the Union Carbide and Carbon Corporation and the Air Reduction Company in producing compressed oxygen and acetylene; and the Texas Gulf Sulphur Company and the Freeport Sulphur Company in sulphur production.³ All these examples relate to the national market of the United States. There are many other cases in which single firms or pair of firms control regional or local markets for various kinds of economic goods.

Conditions of effective monopoly may also exist in industries in which no single firm or pair of firms controls all or almost all of the output. Of the 1807 products studied from among those included in the Census of Manufactures for 1937, there were 291 in which the leading single company controlled between 50 and 75 per cent of the total supply. In the case of 37 products, four firms accounted for the entire supply. In 164 cases, four firms produced over 90 per cent of the supply; and in 328 other cases, the part produced by the four leading firms was not disclosed (in order to prevent the identification of individual firms). There were 670 products in which the four leading concerns turned out 75 per cent or more of the supply, or in which information on this point was withheld. The general conclusion was that from two-fifths to one-half of the goods under consideration were produced in fields in which four concerns controlled 75 per cent or more of the supply.⁴

Holding Companies. In industries in which the greater part of the supply of some economic good is controlled by a few large concerns, these firms are usually combinations of formerly independent companies. In many cases, the large firms are holding companies which exist for the purpose of owning and controlling the securities of other corporations. With their own securities or with cash, they buy up at least a controlling interest in the voting stock of the corporations which are to be combined, and thus are able to control management, output, and prices. The holding company is very similar to the old trustee device, the securities of the holding company taking the place of the trust certificates and the board of directors of the holding company superseding the board of trustees. However, since many states have passed laws authorizing the exist-

³ *Ibid.*, pp. 98-110.

⁴ *Ibid.*, pp. 113-118.

ence of holding companies, this device is not automatically illegal, as was the old trustee device.

Mergers. The merger is somewhat similar to the holding company. While the holding company controls several business firms through security ownership, the merger exercises the same control through holding the physical properties of the various firms. In some instances, several corporations lose their identity in a new corporation which is organized to manage all the properties of the old firms. In other cases, one of the old corporations remains in existence and the others are merged in it. Like the holding companies, mergers are not illegal in and of themselves. The existence of one or more holding companies or mergers in a particular industry does not necessarily mean a condition of effective monopoly.

Price Leadership. Price leadership is an informal method of control. In industries in which the firms have heavy fixed costs, price-cutting is an extremely dangerous practice, especially if consumers can readily postpone their purchases. Each of the large companies knows that a price cut on its part would be swiftly followed by similar cuts by other large competitors, to the detriment of all companies concerned—and so prices tend to be maintained by the large companies, with some one company serving as the price leader. The numerous small companies which may exist in the same industry usually follow faithfully the price leadership of the large company or companies, either because they fear reprisals if they cut prices or because they believe their economic welfare will be enhanced by following the leader. In such industries, price changes seldom occur, and when they do they are introduced by all firms at about the same time. Evidences of price leadership have been found in industries producing anthracite coal, packer cans, corn products, fertilizer, canned salmon, industrial alcohol, steel, cement, agricultural implements, gasoline, non-ferrous metals, newsprint paper, glass containers, and biscuits and crackers.⁵ Since price leadership involves no actual agreement or conspiracy among the firms, it is very difficult to combat.

Price Agreements. When the sellers in an industry are relatively few they may enter into actual agreements to establish and maintain uniform prices and terms of sale. Price maintenance may also result from the activities of trade associations, but we refer here to price agreements between firms which are otherwise unassociated in their respective industries. Agreements of this kind are in open violation of anti-trust laws which forbid conspiracies in restraint of trade. During the past twenty years many court decisions have been handed down against firms maintaining price agreements.

Basing-Point Systems. In some industries a system of "delivered prices" is maintained through the use of one or more "basing points." When several basing points are used, all firms in a given district charge their

⁵ *Ibid.*, p. 123.

customers a uniform base price, plus freight from the basing point to the customer's geographical location. Frequently the actual freight from seller to customer is less than that from the basing point to the customer, and the difference goes into the seller's profit. Plants located outside a given basing-point district must ordinarily charge the same prices as those inside the district, when making sales in that district, and absorb the higher freight charges as best they can. Thus, a customer in a given district would be quoted the same price by all plants in the district, and by plants outside the district as well, so that price competition is eliminated. The firms which operate basing-point systems often claim that these uniform prices are only "asking prices," and that actual prices charged and received may differ somewhat from one firm to another. Basing-point systems have been used in the steel industry, the cement industry, and some 50 other industries.

Patent Pools. Effective monopoly has been maintained in some industries by means of patent pools. When important patents are owned by a small number of large firms, each firm may grant licenses to the others to use its patents, or all firms may pool their patents. This group of firms may then use its resources to exclude new producers from the general field of production, by refusing to grant licenses to outsiders or by charging very high royalties for the use of patents. When licenses are granted to new firms, the members of the pool may attempt to control output, markets, or prices charged by such newcomers. Patent pools do not always lead to effective monopoly, but the courts have found patent-pool monopolies among producers of ophthalmic lenses, porcelain insulators, radios, and gasoline.⁶

Other Control Methods. In addition to the methods of maintaining effective monopoly which have already been described, market-sharing is sometimes practiced by the few large firms in a given industry. Market-sharing means simply that the firms do not compete against each other for the same customers. Each firm has a particular share of the general field, and works it exclusively. Market-sharing seems to be common among investment bankers, has been practiced by meat packers and anthracite coal producers, and is said to have been used in the tobacco industry, at least in the marketing of certain products.⁷ Again, control in some industries has been achieved through interlocking directorates, stock ownership, financial relationships of the firms with a common financial organization, and in other ways.

Trade Associations. Formal organizations of firms in modern industry usually take the form of trade associations or industrial institutes, which are voluntary, mutual benefit associations having as their members the various business firms in a certain trade or industry. A trade association

⁶ *Ibid.*, p. 159.

⁷ *Ibid.*, p. 176.

may be incorporated or unincorporated. It is usually controlled by a board of directors elected by the members and is financed by dues. The members are independent in most respects and may ordinarily enter or leave the association at will. Trade associations have many legitimate fields of activity, such as "cooperative industrial research, market surveys, the development of new uses for products, the provision of traffic information, the organization of employment bureaus, collective bargaining with organized labor, mutual insurance, commercial arbitration, the publication of trade journals, joint advertising and publicity, and joint representation before legislative and administrative agencies."⁸

But their activities may also include "the establishment of common cost accounting procedures; the collection and dissemination of statistics; the operation of price reporting plans; the standardization of products, terms of contracts, price lists, and differentials; the provision of credit information; the interchange of patent rights; the administration of basing-point systems, the joint purchasing of supplies, and the promulgation of codes of business ethics; each of them practices which may operate to restrain competition in quality, service, price, or terms of sale."⁸ There were in 1940 some 2000 trade associations of national scope in the United States, hundreds of which have been involved in anti-trust proceedings of one kind or another.

THE CASE AGAINST MONOPOLIES

The Efficiency of Monopolistic Concerns. While cases of complete monopoly in the hands of a single company are rare in the American economy, there are many cases in which a single firm, or small group of large firms, controls a sufficiently large part of an industry to give it effective monopoly control. The attitude of most people toward complete and partial monopolies has for many years been one of acute distrust and opposition. Though not all monopolies have been successful, many have been highly so, and in most cases the reason for success seems to have been the control over production and prices, rather than any unusual economies in operation or elimination of waste. The advantages of large-scale production are many and well known, but most of them reach a limit rather quickly, and do not go on increasing indefinitely as a firm grows in size. Monopoly control is not required in order to reap these advantages.

Other advantages, not available to a single large-scale firm, may be enjoyed by certain types of business combination. They may avoid competitive duplication of plant, and of advertising and selling effort. They can eliminate a large number of competing brands, and avoid "cross-hauling" by filling each order from the nearest plant. When a period of

⁸ *Ibid.*, p. 226.

poor business hits an ordinary industry, it may be necessary for all plants to run at part capacity, and thus run inefficiently. A combination, however, can often close some plants completely and keep others running efficiently at full capacity. The several plants controlled by a combination may be made to specialize in different phases of its production, and rivalry between plants may be used as a stimulus to greater efficiency. Finally, any new processes or machines owned by any one of the firms may be used by all when all are members of a combination; otherwise, each plant would usually have its own trade secrets and special methods, and no one plant would have access to all of the best methods of production. This list of advantages, though not exhaustive, is imposing; but a few moments' reflection will convince the reader that a business combination need not be a monopoly in order to enjoy these advantages. Little statistical evidence is available as to the costs of production of monopolies, but the little that we have suggests that these costs are very seldom much lower than the costs of independent concerns or of combinations which lack monopoly powers.

Monopoly Prices. Since monopolies may claim but few, if any, economies as distinctly their own, it is evident that their success has almost always been due to restricting output and charging monopoly prices. The result has been large profits at the expense of consumers. It is, of course, very difficult to determine the exact effect of monopoly control over prices. To do this, we should have to compare the monopoly price with the price which would have prevailed under competitive conditions. Since there is no way to determine the latter, this comparison cannot be made. We know, however, that the prices charged under monopoly have usually been sufficiently high to yield large profits. It is true, as some defenders of monopolies have said, that prices in certain controlled industries have been stable or have even declined at times, but it is also true that monopoly profits may be gained without price increases. A stable price will yield large profits if it is high enough in the first place, or if it is accompanied, over a period of time, by falling costs of production. Even a falling price over a period of time will be highly profitable if costs fall more rapidly than the price itself.

The profits made by monopolies are a fair indication of the effect of monopoly control upon prices. For example, among the early trusts, the original Standard Oil Company had earnings which ranged between 48.8 and 84.5 per cent on its investment, and averaged 61 per cent between 1896 and 1906.⁹ The Aluminum Company of America made a net income of \$335,000,000 over a fifty-year period, though its original investment was only \$2,000,000.¹⁰ Among the two-firm monopolies, the Texas Gulf Sulphur Company had an average annual profit of 28.75 per cent on its

⁹ *Ibid.*, p. 66.

¹⁰ *Ibid.*, p. 72.

investment from 1919 to 1938, and paid dividends over a period of eighteen years which averaged 95.46 per cent annually on the original value of its stock; and the Freeport Sulphur Company, over a period of twenty-five years, has paid average annual dividends of 24.75 per cent on the ledger value of its stock.¹¹ It is clear that such profits can be made only from prices which are well above the cost of production level, whatever may happen to the absolute level of the prices. From the point of view of society, then, one of the principal objections to monopoly is its effect on prices and the burden thus placed on the consumers of monopoly products.

Unfair Tactics of Monopolies. When the smaller firms in an industry operating under monopoly conditions have refused to cooperate with the monopolistic firms, or when new competition has sprung up, the monopolistic firms have often resorted to unfair tactics to attain their ends. These monopolistic firms, with large or national markets, have often engaged in local price-cutting. That is, in areas in which they have had competition, they have cut prices to the cost level, or even below cost if necessary, in order to force their competitors to take losses. Meanwhile, they themselves have been able to "break even" or make money by continuing to charge high prices in non-competitive areas. The Standard Oil Company was a notorious follower of this policy of "cut-throat competition," but there were many others.

Firms that controlled a tremendous volume of business were once able, by playing one railroad against another, to secure rebates on freight rates, or to induce the railroads to establish particularly favorable rates out of the cities from which these firms shipped most of their products. The Standard Oil Company once made an arrangement whereby it not only received a substantial rebate on its own shipments, but also received a similar sum from the freight payments made by its competitors. The unfairness of such a policy is apparent.

Monopolistic firms have sometimes ordered dealers selling their products to refrain from handling the products of competing companies, thus limiting the market open to competitors. The International Harvester Company, among others, used these "exclusive dealer arrangements." A similar device was the "tying contract." The United Shoe Machinery Company, for example, leased indispensable machines on which it held patents, but required the lessee to contract also for the use of other machines on which the patents had expired, and which were offered by other firms at lower figures. In this way, the company forced shoe manufacturers to use its machinery exclusively, and thus destroyed competition.

Sometimes, monopolistic firms have interfered with the flow of services and supplies needed by their competitors. They have persuaded or forced banks to cut off credit, and to call in the loans of competing firms, and have led newspapers and periodicals to refuse competitive advertising.

¹¹ *Ibid.*, p. 110.

Railroads have been induced to develop sudden "shortages" of freight cars of the necessary type; and sellers of raw materials have been persuaded not to fill the orders of competitors, or to fill them with inferior materials or only after long delay.

When public feeling against certain monopolies has run high, they have often made it appear that firms under their control were independent. Those who might refuse to buy from the monopoly would buy from those "bogus independents," and these companies could compete with the genuine independents without their fraudulent nature becoming known. Many monopolistic firms have brought spurious lawsuits against competitors, charging patent infringement or other injury. These suits would often tie up the business of the competitors and involve them in heavy legal costs, even though the suits were eventually dismissed. Competitors have sometimes been intimidated by the mere threat of such suits. On the other hand, monopolistic firms have infringed upon the patent rights of competitors or appropriated trade secrets gained through espionage or bribery, confident that they would make more through these illegitimate acts than any amounts which the courts might award the competitors by way of damages. Customers of competitors have been bribed to cancel orders or to default on payments, and valued employees have been bribed to leave the employ of competitors.

Finally, monopolistic concerns have sought to damage their competitors' products or reputations. For instance, the National Cash Register Company is said to have "doctored" machines made by competitors so that they would break down or fail to work satisfactorily. The same company bought up competitors' machines from their users and offered them for resale, displaying them as "junk" or as "inferior products" at 30 cents on the dollar.

Monopolies and Business Cycles. Monopolies have also been charged with increasing the instability of our economic system. In periods of good business they maintain stable prices for their products in the face of increasing production and falling unit costs, and without increasing the wages of labor significantly. Such policies, in spite of all that can be done to support consumption through installment selling or other credit devices, lead eventually to business breakdown and depression. And in periods of depression, the monopolies are likely to hold their prices at the customary level, taking losses by selling fewer units at the stable price rather than by selling more at a lower price. This policy results in laying off labor, curtailing purchases of materials and supplies, and reducing consumer purchasing power, and eventually affects all industries and adds to the cumulative downward spiral of depression. Some economists hold that cyclical swings in business can never be eliminated, or even greatly reduced in severity, so long as many of our most important industries are controlled by monopolies with their rigid or "sticky" prices.

Monopolies and Economic Progress. Monopolies may also operate as a bar to economic progress. Virtually complete monopolies need not worry about developing new methods and processes or making new inventions, for their profits do not depend upon continuous progress in production. Indeed, they may even go to the other extreme and acquire control of new inventions by fair means or foul, only to put them on the shelf for a long time so that they will not overturn existing conditions in the industry. However, in certain industries which are dominated by a few large concerns, there has often been keen competition in the field of technological improvement; and the public has frequently benefited by this sort of competition.

Monopoly Control of the Whole Economy. It is sometimes asserted that the monopoly problem goes far beyond the question of monopoly control in particular industries—that our gigantic industrial and financial concerns not only control individual industries, but have extended their control to the economy of the United States as a whole, to the government of the country, and even to its public opinion. These conclusions are based on data dealing with the concentration of economic power in this country.

It is estimated that corporations now transact from 60 to 65 per cent of the total volume of business in the United States, and own almost 80 per cent of all business wealth. Moreover, the ownership of corporate wealth is concentrated in a relatively few large corporations. In 1937, 228,721 corporations with assets of less than \$50,000 each made up 55 per cent of all corporations, but owned only $1\frac{1}{2}$ per cent of total corporate assets. The 394 largest corporations owned about 45 per cent of all corporate assets, though they comprised less than one-tenth of one per cent of the total number of corporations.¹² There were some 30 "billion-dollar" corporations in the United States. The largest were the Metropolitan Life Insurance Company and the American Telephone and Telegraph Company, each of which had larger total assets than any of 38 of our states. The smallest of these 30 corporations was richer than any one of 18 of our states.¹³ The number of "billion-dollar" corporations increased to 43 during the period of World War II.

This concentration of business wealth in the hands of relatively few large corporations is general throughout the leading fields of industry and finance. In 1936, the 200 largest non-financial corporations had total assets of over \$75,000,000,000, or about one-fourth of the national wealth. The three largest industrials (Standard Oil Company of New Jersey, United States Steel Corporation, and General Motors Corporation) had total assets of \$5,209,200,000; the three largest public utilities (American Telephone

¹² Temporary National Economic Committee, *Final Statement of Senator Joseph C. O'Mahoney*, Washington, Government Printing Office, 1941, p. 7.

¹³ *Ibid.*, p. 5.

and Telegraph Company, Consolidated Edison Company of New York, Inc., and Commonwealth and Southern Corporation) had total assets of \$6,548,300,000; and the three largest railroads (Pennsylvania Railroad Company, New York Central Railroad Company, and Allegheny Corporation) had total assets of \$6,958,000,000.¹⁴ In 1933, the 50 largest financial corporations had total assets of some \$35,000,000,000. The three largest banks (Chase National Bank, National City Bank, and Guaranty Trust Company) had total assets of \$6,078,600,000, and the three largest insurance companies (Metropolitan Life Insurance Company, Prudential Insurance Company, and New York Life Insurance Company) had total assets of \$9,607,900,000.¹⁵

Income, Ownership, and Savings. The concentration of corporate income is similar to that of corporate wealth. In 1937, of 477,838 corporations which made income tax returns, 285,810 had no income. The corporations which had net incomes of less than \$5000 made up 65 per cent of all which reported incomes, but received less than 2 per cent of the total income of all these corporations. At the other extreme, 248 corporations received 40 per cent of the total net income of all corporations, though they made up only one-tenth of one per cent of the total number of corporations with incomes. It might be thought that this concentration of wealth and income is unimportant, because the ownership of these corporations is popularly supposed to be widespread. Actually, however, the ownership of corporations is highly concentrated, for it is estimated that one-half of all dividends paid in the United States are received by stockholders who comprise less than 1 per cent of all American corporate stockholders.¹⁶ Moreover, the situation is not improving. In 1937, the corporations with assets of \$1,000,000 or more made up only 5 per cent of a group of non-financial corporations studied, but they had 88 per cent of the savings of all these corporations. The corporations with assets of less than \$50,000 were 59 per cent of the total group but had no savings at all.¹⁷

Interlocking Interests of Large Corporations. The mere fact that economic power is largely concentrated in relatively few corporations does little to support a claim of monopoly control of the whole economy unless it can be shown that these large corporations work together as a group toward this end. This seems to be the case. In 1937 there were 3544 directorships on the boards of the 200 largest non-financial and the 50 largest financial corporations, and these directorships were held by 2725 individual directors. One director held 9 such posts among the 250 cor-

¹⁴ National Resources Committee, *The Structure of the American Economy*, Washington, Government Printing Office, 1939, pp. 274-276.

¹⁵ *Ibid.*, p. 298.

¹⁶ Temporary National Economic Committee, *Final Statement of Senator Joseph C. O'Mahoney*, p. 8.

¹⁷ *Ibid.*, p. 9.

porations, and there were 83 men who held 4 or more directorships. Of these, 59 were active in the affairs of at least one of the corporations which they served.¹⁸

The National Resources Committee found that companies controlling 62 per cent of the total assets of the 200 largest non-financial and 50 largest financial groups were members of 8 large "interest groups," which combined industrials, railroads, and public utilities with financial organizations in informal communities of interest. The so-called Morgan-First National interest group included 13 industrials, 12 public utilities, 5 major railroad systems, and 5 banks. These companies had total assets of over \$30,000,000,000. The Kuhn Loeb group included 5 major railroad systems, 2 other railroads, 1 utility, and 1 bank, with total assets of almost \$11,000,000,000. The smallest of the 8 interest groups was the Boston group, which comprised 4 industrials, 2 utilities, and 1 bank, with total assets of less than \$2,000,000,000.¹⁹ There was also said to be much overlapping and inter-connection between these interest groups.

Controlling the Government. That the large business and financial interests of the country are organized into pressure groups, for the purpose of influencing and controlling our various governmental units, seems hardly open to question. According to a recent government study, these pressure groups include such organizations as the Chamber of Commerce of the United States, the National Association of Manufacturers, the Edison Electric Institute, the Association of Life Insurance Presidents, the Association of American Railroads, the American Bankers Association, the Investment Bankers Association of America, the American Iron and Steel Institute, the American Petroleum Institute, the National Lumber Manufacturers' Association, the National Coal Association, the Copper Institute, and such closely related groups as the American Bar Association and the American Newspaper Publishers Association.²⁰ There are, of course, other pressure organizations representing workers, farmers, and other groups, but in general the forces of business and finance are better organized and have far greater resources and staying power.

The methods used by pressure groups in attempting to influence the government include working for "favorable" candidates for legislative and other offices, and against other candidates; lobbying for the passage of desired legislation and to prevent the passage of unfavorable laws; opposing the administrative agencies charged with the duty of enforcing laws affecting business and finance; fighting unfavorable laws through the courts and advising members to disregard the laws until court decisions

¹⁸ Temporary National Economic Committee, *Progress Report of the Executive Secretary, January 15, 1941*, Washington, Government Printing Office, 1941, p. 11.

¹⁹ National Resources Committee, *The Structure of the American Economy*, pp. 306-317.

²⁰ Temporary National Economic Committee, Monograph No. 26, *Economic Power and Political Pressures*, Washington, Government Printing Office, 1941, pp. 14, 15.

have been reached; trying, in later elections, to bring about the election of legislators who will repeal or amend unfavorable laws; and working later for the repeal or amendment of these laws. The efforts of business and financial interests to influence the government are not always successful, but they are effective in many cases.

Control of the Press. A considerable measure of control over the newspapers of the country aids our business and financial groups in their efforts to dominate the American economy. Many pressure organizations which represent business and finance have large funds available for advertising, supply newspapers with "canned" articles and editorials, and in general try to keep on cordial terms with the publishers of important papers. The newspaper publishers frequently reciprocate. In the struggles between business and labor or business and government, the business side of the controversy is presented favorably by the press. Labor is commonly held responsible for industrial disputes and for any violence which results, while the government is represented as the prosecutor if not the persecutor of business. In addition to "editorializing" the news, some newspapers have suppressed or "toned down" news unfavorable to leading advertisers. On the basis of the picture presented in the last few pages, many people conclude that the problem of monopoly today goes far beyond that of price and production control in particular industries.

ATTEMPTED SOLUTIONS OF THE MONOPOLY PROBLEM

Checks on Monopoly Powers. Even in the absence of governmental interference, the effects of monopoly control are not always so bad as they are painted. A monopoly must exercise some care as to how high a price it charges, or it may cause customers to turn to substitutes or competition to develop in the form of new firms attracted by large profits. Monopolies may conceivably moderate their policies for fear of stirring up public opinion, or because of a sense of justice or fairness on the part of their management. Even more likely, the management of a monopoly may become stagnant or inert, and fail to take full advantage of its powers and opportunities. Finally, even if a monopoly is determined to exploit the public to the utmost, it may not be possible to determine the exact price which will bring in the greatest possible total net return.

However, the people of the United States, with their strong distrust of monopolies, have not been willing to depend upon the semi-automatic forces described above to restrain the monopolies in the use of their powers. Since the monopoly movement constitutes a problem which is national in character, we have demanded federal legislation dealing with its abuses. The basic law, the Sherman Anti-Trust Act, was passed in 1890, shortly

after the start of the monopoly movement but before the most active years of monopoly development.

The Sherman Anti-Trust Act. The Sherman Anti-Trust Act was a rather brief, though important, document. It declared illegal all contracts, combinations of business firms, and conspiracies, in restraint of interstate or foreign commerce. It made guilty of a misdemeanor every person who monopolized, attempted to monopolize, or combined or conspired with any other person or persons to monopolize, any part of the trade or commerce among the states or with foreign nations. It declared illegal all contracts, combinations, and conspiracies in restraint of trade in a territory of the United States, in the District of Columbia, or between either of these and any state, states, or foreign nations. The term "person" as used in the Act was defined as including corporations and associations.

Penalties for the violation of these provisions were set at a fine not exceeding five thousand dollars, or imprisonment not exceeding one year, or both. Persons suffering damages as the result of violations of the Act could sue the guilty parties in the federal courts and recover triple damages, plus costs. The circuit courts of the United States were given authority to prevent and restrain violations, by injunction or otherwise, upon petition of the district attorneys and after hearings had been held. These courts were empowered to summon witnesses from any part of the country. The property of any violator, intercepted in the course of interstate or foreign commerce, was declared forfeited to the United States.

Enforcement of the Sherman Act. At first glance it would seem that Congress, in passing the Sherman Act, had forged a powerful weapon for dealing with monopolies. However, the Sherman Act was quite ineffectual for many years, and the period of most active monopoly formation—1897 to 1903—occurred after its enactment. This early ineffectiveness of the Act was attributable to several causes, including uncertainty of the exact meaning of certain parts of the law, lack of funds with which to enforce it, the apathy and incompetence of the attorney-generals and their subordinates which led to poorly drawn indictments and inexpert pleading of cases, and the lack of public support. In 1895, an important case involving the sugar trust, *United States vs. E. C. Knight Company*, was decided in favor of the trust in such manner as to throw doubt upon the federal government's power to deal with monopolies. The Supreme Court held that the government had proved only the concentration of industrial control in the industry and not restraint of interstate or foreign commerce.

A few years later, two decisions favorable to the government put new life into the Sherman Act. In 1899, the Supreme Court unanimously upheld the decision of the Circuit Court of Appeals dissolving the pool between the Addyston Pipe and Steel Company and five other corporations, all engaged in the manufacture of cast-iron pipe, and enjoining the pool members perpetually from carrying out their agreement. In 1904, the

Northern Securities Company case decided definitely that the Sherman Act applied to holding companies, whenever these companies operated to restrain interstate or foreign commerce. The Northern Securities Company, by giving its own securities in exchange, had acquired almost complete control of the Northern Pacific and Great Northern Railroads, and would have operated to eliminate competition between these two roads. These two decisions encouraged the government to bring further suits, and discouraged the formation of additional monopoly organizations.

The Rule of Reason. In the cases involving the Standard Oil Company of New Jersey and the American Tobacco Company, both of which were decided in 1911, the Supreme Court developed the now famous "rule of reason" for deciding such cases. Although the Court had thrice decided that the Sherman Act applied to *all* contracts, combinations, and conspiracies in restraint of interstate or foreign commerce, it now held that the Act was meant to apply only to "unreasonable restraints" on such commerce.

The Court suggested that the Sherman Act had been worded so strictly because of the many new types of contracts and combinations which were being developed, and the desire of the framers to see to it that no monopoly escaped merely because of the form in which it was organized. The contracts, or other acts, prohibited in the law were not explicitly defined and the classes of acts prohibited were so broad that almost any activities of business men might come under the influence of the Act under certain conditions. Thus, it was held, the use of reason became indispensable in deciding whether particular business activities had or had not brought about the wrongs which the statute prohibited.

As Justice Brandeis put it in 1918, in the case of the Board of Trade of the City of Chicago, *et al., vs. the United States*: "Every agreement concerning trade, every regulation of trade restrains. To bind, to restrain, is of their very essence. The true test of legality is whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition." In spite of the development of the rule of reason, the Supreme Court decided that both the Standard Oil Company and the American Tobacco Company were operating in violation of the Sherman Act, and they were ordered to dissolve within a reasonable period of time. Later on, however, under the interpretation of the rule of reason, a government case against the United States Steel Corporation was decided in favor of that company.

The Clayton Act. Because the Sherman Act was not wholly successful in carrying out the purposes of its framers and because there was need for further clarification of its provisions, two additional laws were passed by Congress in 1914. The first of these, the Clayton Act, with certain qualifications, prohibited local price discrimination and the use of tying contracts. Because of the popularity of the holding company device, the Act spe-

cifically provided that holding companies were illegal if their effect was to lessen competition substantially in any industry, to restrain commerce in any section or community, or to create a monopoly in any line of commerce. It was also provided that, after 1916, no person should be at the same time a director of two or more corporations engaged in commerce, other than banks and common carriers, any one of which had a capital, surplus, and undivided profits of more than \$1,000,000, if such corporations were, or had been, competitors, so that the elimination, by agreement, of competition between the firms would constitute a violation of the anti-trust laws.

Violations of the anti-trust laws by corporations were thereafter to be considered as violations by the directors or other officers who were responsible for the illegal activities, and these officials were to be subject to the penal provisions of the anti-trust laws. Labor organizations and certain types of agricultural associations were exempted from the provisions of the anti-trust laws. Responsibility for the enforcement of these laws was vested in the Federal Trade Commission for industrial combinations, the Federal Reserve Board for financial institutions, and the Interstate Commerce Commission for combinations in transportation. The Clayton Act constituted an addition to, rather than a change in, the anti-trust law as set up in the Sherman Act, for government suits against monopolies continued to be brought under the Sherman Act. The Clayton Act was also intended to be a preventive measure in connection with monopoly formation rather than, as in the case of the Sherman Act, a cure for monopolies after they had been formed.

The Federal Trade Commission Act. A commission of five members, appointed by the President, for the administrative regulation of business conduct was created by the Federal Trade Commission Act, which like the Clayton Act, was passed in 1914. The principal powers of the Federal Trade Commission were (1) the investigation, and (2) the prevention, of unfair competition.

In the field of investigation, the Commission was empowered to gather and compile information concerning the organization, business conduct, practices, and management of any corporation engaged in commerce, except banks and common carriers, and to require such corporations to make regular or special reports, or to answer specific questions. It could, upon request of the President or either house of Congress, investigate and report the facts concerning alleged violations of the anti-trust acts by any corporation. When requested by the Attorney-General, it could investigate and make recommendations for the readjustment of the business of any corporation alleged to be violating the anti-trust laws, and, when requested by the court, could ascertain and report an appropriate form of decree in any suit in equity under the anti-trust laws, and investigate the manner in which any final decree in an anti-trust case had been or was being

carried out. It could make public, from time to time, such portions of its information as it deemed expedient in the public interest.

With regard to conditions of competition, the Act declared that unfair methods of competition in commerce were unlawful, and the Commission was directed to prevent persons and firms from using such unfair methods. The Act did not specify what were or were not unfair methods of competition, so that the Commission was granted a wide territory within which to exercise its judgment. If the Commission had reason to believe that a person or firm was using unfair methods, it could serve a complaint, stating its charges and providing for a hearing. After the hearing, if the charges proved to be true, the Commission could order the person or firm to stop employing the objectionable methods. If the order was not obeyed, the Commission could apply to the circuit court of appeals of the district for the enforcement of the order. Once this point was reached, the court had full jurisdiction over the case and could affirm, modify, or set aside the order of the Commission. Appeals could be taken to the Supreme Court.

The Work of the Federal Trade Commission. In trying to prevent the formation of monopolies under the provisions of the Clayton Act, the Federal Trade Commission has fought such things as corporate combinations tending toward monopoly, agreements and understandings between competitors, resale price maintenance, price discrimination, and tying and exclusive dealing arrangements. In trying to maintain standards of fair competition under the Federal Trade Commission Act, the Commission has proceeded against misrepresentation of the nature, quality, origin, or value of products; sales methods embodying an element of chance or lottery; commercial bribery; and disparagement and miscellaneous interferences with competitors.

Misrepresentations of the nature of products involve selling rebuilt or renovated articles as new, or such acts as calling articles made wholly or partly of rayon by such names as silk, pongee, satin, or taffeta. In connection with the quality of products, the Commission has forbidden the representation of bath salts as a remedy for obesity, a certain hair dye as safe, non-toxic, or non-poisonous, and a bunion remedy as a permanent and effective cure.²¹ In passing on the origin of products, the Commission has proceeded against blenders of liquor who represented themselves as distillers, clothing producers who implied that they were weavers of cloth, and furniture dealers who pretended to be manufacturers. Misrepresenting the value of products involves attempts to convince the buyer that he is getting an unusually good bargain. In this connection, the Commission has attacked the offering of "free" goods which are not really free, advertising articles for sale at slashed prices when in reality usual prices are charged, and advertising a 6 per cent rate of interest in connection with

²¹ H. L. Purdy, M. L. Lindahl, and W. A. Carter, *Corporate Concentration and Public Policy*, New York, Prentice-Hall, Inc., 1942, p. 439.

installment sales when the actual effective rate of interest is about 12 per cent.

Sales methods involving lottery or chance are illustrated by one company's practice of selling small pieces of inferior penny candy and returning the penny to some fortunate purchasers inside the wrapper of an occasional piece of the good.²² In commercial bribery, a seller presents gifts to employees or agents of customers, without the knowledge of the customers, in an effort to secure sales. Finally, in connection with the disparagement of competitors' products, the Commission has proceeded against butter manufacturers who stated that oleomargarine is made from coconut oil which is foul and unfit for human consumption, a producer of aspirin who claimed that he had exclusive rights to the name and that his competitors' products were counterfeit, and a newspaper publisher who made false statements about the financial condition of competitors.²³

The Commission has not been very successful in its efforts to preserve competition and prevent monopoly, and monopoly cases have usually made up a rather small part of its total activities. Monopoly proceedings are costly, and the Commission has not had much money with which to conduct them. Moreover, the provisions of the Clayton Act which the Commission has been trying to enforce suffered from defective draftsmanship, and the courts have not been willing to interpret them in a way which would make them powerful instruments in the fight against monopoly.

On the other hand, the efforts of the Commission to prevent and eliminate unfair competitive practices have been much more successful. Its activities in this field have been many and vigorous, and its cases have fared rather well in the courts. The substantive law of trade practices is more satisfactory than the common law, for under the common law it is necessary for complaining parties to show that they have suffered special injury as a result of the practices in question. It is better to have a commission with a direct responsibility to take action against unethical practices than to depend upon court actions brought by private individuals, for such individuals, because of considerations of cost and the uncertainty of success, are often unwilling to bring cases into court. While the unfair practices proceeded against by the Commission have usually been those of competitors or monopolistic competitors rather than of monopolies, we should not assume that the Commission's activities have had no preventive influence in connection with monopolies. Since unfair competitive practices often gave monopolies their start or at least were of considerable aid during their formative period, it is probable that the organization of some monopolies has been prevented by the work of the Commission in this field. On the whole, the Commission's record in connection with unfair

²² *Ibid.*, p. 450.

²³ *Ibid.*, pp. 454, 455.

competitive practices has been creditable, even though the Commission has fallen further and further behind in its work, has suffered from inadequate appropriations, has continued to use cumbersome and time-consuming methods of procedure, and has been less blessed than some governmental commissions with high-quality and permanent personnel.

Minor Changes in the Anti-Trust Laws. During the period from 1914 to 1929, several minor changes were made in the application of the anti-trust laws. The Shipping Act of 1916 legalized agreements between steamship lines with regard to fixing rates, apportioning traffic, and other matters, subject to the approval of the Shipping Board. The Packers and Stockyards Act of 1921 classified packers, commission merchants, and stockyards for special regulation under the supervision of the Secretary of Agriculture. The Webb-Pomerene Act of 1918 legalized agreements and associations entered into for the sole purpose of engaging in export trade, or holding company arrangements for the same purpose, providing that restraint of trade within the United States did not result. The Capper-Volstead Act of 1922 legalized the organization of cooperative associations of agricultural producers, provided they operated for the mutual benefit of members, did not handle products of non-members to an amount greater in value than those handled for members, and either allowed no member more than one vote or paid no dividends on stock or membership capital in excess of 8 per cent a year.

The N.R.A. and the Anti-Trust Laws. As the post-1929 depression wore on, an increasing volume of opposition to anti-trust laws developed among business men. It was held that business instability was bound to prevail so long as business firms in an industry were not permitted to cooperate with respect to industrial capacity, output, and prices, without being subject to prosecution under the anti-trust laws. Moreover, it was claimed that unfair methods had not been eliminated and that, under the influence of the depression, they had become more intolerable than ever.

These complaints led to the passage, in 1933, of the National Industrial Recovery Act, which authorized trade associations or other organizations of business men to draw up "codes of fair competition" for their respective industries and submit them to the government authorities for approval. These codes, after being examined at hearings attended by representatives of labor and consumers, as well as government officials, were submitted to the President and, if approved by him, thereupon constituted the laws of business conduct for the respective industries. The codes affected all firms in an industry regardless of whether they had or had not been parties to their formation.

Not only were the codes expected to enforce fair practices in the industries, but it was understood, also, that business firms would not be prosecuted under the anti-trust laws for activities which were approved under the codes. In return for these concessions to business men, the latter were

required to make the codes acceptable to the government with respect to child labor, collective bargaining for employees, and maximum hours and minimum wages for their workers.

The general success, or lack of success, of the N.R.A. need not concern us here. For the present, it is sufficient to note that the codes of fair competition were rushed through and approved very hastily so that many contained provisions which encouraged the further development of monopoly conditions, under the suspension of the anti-trust laws. Of the first 677 codes, 560 contained some provision for controlling prices, directly or indirectly; 361 set up standard cost systems; 403 forbade sales below "cost"; 352 prohibited members from selling at prices below their individual costs; and 51 attempted to prevent sales at prices below some average costs of the whole industry. Ninety-one codes provided in some way for the restriction of output, by limiting the size of inventories, by forbidding increases in productive capacity without special permission, by limiting hours of operation, or by setting up fixed quotas of production or sale. Finally, some codes provided for sharing markets by prohibiting freight allowances (to keep sellers from selling in distant markets by absorbing freight), by forbidding firms to sell outside their regular market areas at prices lower than those charged at home, or by forbidding firms from selling in other zones at prices lower than those charged by firms in the other zones.²⁴ Since the code system practically compelled the producers in an industry to combine, it is not surprising that the N.R.A. gave a strong impetus to the growth of monopoly powers in many industries and interfered seriously with the traditional governmental policy toward monopolies.

The Robinson-Patman Amendment. Several other current laws have a bearing on the monopoly problem in the United States. One is the Robinson-Patman Amendment to the Clayton Act, passed in 1936. The prohibition of price discrimination by the Clayton Act was concerned chiefly with the effects of such discrimination upon the competitors of the offending company. But price discrimination may have important effects upon the different buyers and their customers, and the Robinson-Patman Amendment seeks to broaden and clarify the provisions of the Clayton Act on this point.

The amendment forbids sellers to charge different prices to different purchasers of commodities of like grade and quality—unless such price differences make only due allowance for differences in the cost of manufacture, sale, or delivery—whenever such discrimination would lessen competition substantially (1) between any buyer and the discriminating firm, (2) between the less favored and the more favored buyers, or (3) between the customers of those buyers. In the past, it was common for manufac-

²⁴ Temporary National Economic Committee, *Competition and Monopoly in American Industry*, pp. 260-265.

turers to market part of their products at regular prices, and to sell the remainder to mail-order houses, chain stores, or department stores at low prices for sale under a different name; or to discriminate for or against these types of marketing agencies, as compared with ordinary wholesalers, jobbers, and retailers. Any such discriminations, unless they can be justified on the basis of cost, are forbidden under the Robinson-Patman Amendment.

Moreover, the amendment authorizes the Federal Trade Commission to fix and establish certain quantity limits beyond which price differences may be prohibited, even though these differences are justified on the basis of differences in the cost of manufacture, sale, or delivery. It is clear that such provisions tend to handicap distributors who have formerly purchased in large quantities and sold at low prices. The amendment itself applies only to sellers in interstate commerce, but it has been reinforced by 32 state laws with similar provisions.

The Miller-Tydings Act. The Sherman Act of 1890 was amended by the Miller-Tydings Act of 1937, so as to legalize contracts for the maintenance of resale prices of branded articles wherever such contracts are approved by state laws, as they are in all but four states. Price-cutting on branded articles, and especially their use as "loss-leaders" by chain and department stores, had long been a source of annoyance, both to manufacturers of the goods, who tried by extensive advertising to build up good will for their goods at regular retail prices, and to competing independent merchants, who naturally found their own trade injured by such price-cutting. Under the Miller-Tydings Act, the prices of branded goods may be controlled by the manufacturer all the way down the line until they finally reach the ultimate consumer.

The effect of the Act is virtually to eliminate price competition among the various sellers of a branded commodity. While the Act states specifically that it does not intend to legalize price-fixing as between the various manufacturers of competing brands or articles, it may develop that the power to fix resale prices of their own goods will increase, rather than diminish, the tendency of "monopolistic competitors" to cooperate with respect to price policy. Hence, the ultimate effect of the Act may be to promote the development of trust conditions in industry.

In addition to the "fair trade laws," which are the state counterparts of the Miller-Tydings Act, 27 states have "unfair practices acts." In general, these measures prohibit wholesalers and retailers from selling goods at prices lower than invoice or replacement cost, whichever is lower, plus a minimum mark-up. The amount of the mark-up is determined in various ways under the different laws, but is supposed to bear some relationship to the seller's cost of doing business.

Recent Enforcement of the Anti-Trust Laws. For several years after the ill-fated experiment with the N.R.A., there was a fairly continuous attempt

to enforce anti-trust legislation. Many court decisions were handed down against firms participating in price-fixing agreements, scores of cases involving the illegal activities of trade associations were fought successfully by the government, and there were several cases involving basing-point systems and patent pools. Among the well-known cases were those brought against the Aluminum Company of America; the Bausch and Lomb Optical Company; the International Business Machines Corporation and Remington-Rand, Inc.; the American Medical Association; the Great Atlantic and Pacific Tea Company; three leading drug manufacturers; the American Surgical Trade Association and 24 member firms; the American Society of Composers, Authors, and Publishers; four manufacturers of computing gasoline pumps; the three leading companies producing automobiles (in connection with installment financing); and five important producers of motion picture films.

Considerations of space make it impossible to analyze these and other individual cases in detail. In some cases the government was unsuccessful in its anti-trust prosecutions, but it fought many more to a favorable conclusion in the courts. In the year ending June 30, 1941, for example, the Anti-Trust Division of the United States Department of Justice won 58 cases and lost 6 under the Sherman Act, instituted 88 new cases, and brought 2797 new defendants into court. In the same year, it won 228 cases and lost 6 under other anti-trust laws, instituted 249 new cases, and brought 623 new defendants into court.²⁵

The period of World War II, however, was another story. Under war-time legislation, certificates carrying immunity from the anti-trust laws could be issued by the Department of Justice whenever the Chairman of the War Production Board, after consultation with the Attorney General, found such action desirable from the point of view of war production and the successful prosecution of the war. Hundreds of these certificates were issued during the war period. The Attorney General also cleared with the War Production Board certain cases in which joint activities within an industry were necessary for war production. The Department of Justice was authorized to postpone certain investigations and trials, involving alleged infringement of the anti-trust laws, where such action seemed necessary in the interest of the war effort; and a number of cases were thus postponed.

A comparatively small number of large companies accounted for the great bulk of the United States' huge volume of production for war purposes. In most fields the large companies emerged from the war much more powerful than before, and in some industries small companies were almost completely eliminated. Finally, anti-trust prosecutions were far less common during the war period than they had been in previous years. In 1944,

²⁵ *Annual Report of the Attorney-General of the United States, 1941*, Washington, Government Printing Office, 1942, p. 64.

for example, the Department of Justice won 32 cases and lost 6 under the anti-trust laws, and instituted 22 new cases involving 574 defendants.²⁶ On the whole, then, the events of the war period were unfavorable from the point of view of the government's traditional anti-trust policy.

A Final Estimate of the Anti-Trust Laws. In spite of whatever accomplishments may be credited to the anti-trust laws of the United States, we must conclude, in general, that the federal government's campaign against monopolies has not been outstandingly successful. The criminal penalties of the Sherman Act and other laws have amounted to very little. It has been extremely difficult to send men to jail for monopoly activities, and the financial penalties have been too small to be effective. The granting of triple damages to those who have suffered from monopoly activities has never constituted a serious embarrassment to the monopolies. The funds at the disposal of enforcement agencies have often been inadequate. When a large company can spend more money on a single case than governmental agencies have to spend for a whole year's enforcement activities, the prospects for the enforcement of anti-trust legislation are not bright. Business men and their lawyers are often several jumps ahead of the government, and devise new methods of doing what they want to do as the government succeeds in discrediting and eliminating their former practices. Some monopolies have been able to avoid prosecution altogether, while others have been brought into court only to escape all penalties for their activities.

When the government has prosecuted anti-trust cases successfully, and the courts have ordered the dissolution of the monopolies, these dissolutions have rarely, if ever, restored truly competitive conditions. For example, the Standard Oil Company of New Jersey, a holding company which controlled a large part of the petroleum refining business, was ordered dissolved in 1911. The dissolution, however, consisted of giving the stockholders of the holding company their proportionate shares of the stock of the underlying companies, so that these companies continued to be controlled by the same people as before. As a result, there has been some doubt as to the degree to which the successor companies have competed with each other since the dissolution. It may be argued, of course, that the dissolution prevented the trust from maintaining or further perfecting its control over the oil business as time went on, and that new companies have arisen to compete with the successor companies, even if they have not competed with one another. However, in view of the absence of price competition among the major companies in the industry at present, it must be held that the dissolution was a failure in many respects. Other examples of unsuccessful attempts to dissolve monopolies might readily be cited.

The Federal Trade Commission Act and the Clayton Act were somewhat more successful than the Sherman Act, because they represented a partial change in policy. That is to say, they followed the policy of legislative

²⁶ *Ibid.*, 1944, p. 20.

regulation and administrative supervision of competition, rather than the traditional policy of "trust-busting" and enforced competition. In recent years, however, monopolies have become more difficult to control, since many of them arise out of the activities of trade associations or result from the secret and informal cooperation of large firms between which there are no actual agreements or combinations. Finally, none of our anti-trust laws are applicable directly to the larger problem of monopoly controls *between* rather than within industries or to the domination of the economy by large business and financial units.

OUR FUTURE MONOPOLY POLICY

The problem of monopolies is very important, not only in its own right but in relation to other problems of economic instability, agriculture, labor, and international trade. Despite all the hullabaloo about monopolies and trust-busting, our federal government has never established and carried out a really comprehensive program against monopolies, and this fact may account for its singular lack of success in this field. The elements of a comprehensive anti-monopoly program were effectively set forth in a recent study,²⁷ and this program might well be made the official program. It has several phases.

General Measures. In the first place, efforts directed toward the maintenance of a high and stable level of production, employment, and income in the economy as a whole would be helpful in solving the monopoly problem. Fear of depression is partly responsible for the monopolistic practices of labor unions and the monopolistic price policies of industry, and depressions allow some firms to gobble up their competitors. Governmental policies to prevent demoralization of the market in areas where chronic surpluses exist, and to facilitate the transfer of resources from these fields to others, would also be helpful, for such areas furnish fertile fields for the development of monopolies. Again, the government might furnish assistance to new firms which would give direct competition to established monopolies. This could be accomplished through such devices as reforms of the patent laws, changes in taxation to favor young and growing firms, and the refusal to sell government war plants to large established firms.

Governmental Research and Economic Education. Anti-monopoly policies may be ineffective in the case of some industries because not enough is known about industry and market structures. In such cases, governmental research may provide the basis for more satisfactory policies. Governmental research in connection with products and productive processes might be used to make available to small firms, cheaply or without charge, a great amount of knowledge which large firms derive readily from

²⁷ Howard S. Ellis, in *Financing American Prosperity*, New York, Twentieth Century Fund, 1945, pp. 189-196.

their laboratories of experimentation and research, but which at present is not available to small firms. Again, consumer education, grade labeling, and the requirement of accurate and simple information concerning the physical attributes of products would help to eliminate the wastes involved in deliberate and unnecessary differentiation of products and resultant restrictionism.

Removal of Governmental or Legal Supports for Monopoly. Steps should be taken to eliminate governmental policies and legal conditions that are favorable to monopolies. Tariff protection for monopolistic industries should be sharply reduced. Taxation should be reformed, as we have indicated in other connections, to encourage the founding of new enterprises and make possible the development and growth of new small enterprises. Obstacles to interstate trade should be broken down, and federal and state laws legalizing resale price maintenance should be eliminated. Finally, our patent laws should be reformed. Firms with patents should be compelled to license them to other firms which desire to use them, firms with patents should be prevented from controlling the businesses of other firms which are allowed to use the patents, the period for which patent rights are granted should be shortened, and firms should be deprived of patents for violating the patent laws.

Strengthened Enforcement of the Anti-Trust Laws. A comprehensive anti-monopoly program must include vigorous enforcement of the anti-trust laws. The Federal Trade Commission and the Anti-Trust Division of the Department of Justice should be furnished adequate funds and high-grade personnel, and should be made to collaborate more effectively than in the past. Active and persistent investigation and prosecution of individuals and firms following monopolistic practices should be waged. Congress, or the Federal Trade Commission upon receipt of a delegation of authority from Congress, should codify the law with respect to unfair competitive practices, on the basis of past experience, in order to facilitate procedure. Federal charters for corporations might well be required, in order to enforce compliance with national standards of business conduct. Penalties under the anti-trust laws should be increased and applied rigorously to responsible officers and directors as well as to corporations themselves.

Governmental Regulation, Ownership, and Operation. When it is apparent that the monopoly form of organization is more efficient than other forms in a particular industry, direct governmental regulation, or ownership and operation, should be introduced. Regulation might be accomplished by giving to the Federal Trade Commission powers similar to those exercised by the Interstate Commerce Commission in its regulation of transportation. That is, the Commission would control the issuance of securities by monopolies, would have jurisdiction over extensions or restrictions of service or output by the monopolies, and would have the

power, if necessary, to control the prices charged by monopolies for their products, and the wages paid to and hours of work required of their workers, in order to prevent the exploitation of either consumers or employees.

We should not suppose that there are no objections to such a plan for direct regulation of monopolies. There is some doubt that it would be constitutional for the federal government to assume so extensive a control over monopolistic industries, under its power to regulate interstate commerce. The control of prices and wages in particular industries by government or commission is very difficult to administer, and is likely to spread to fields which were not considered in the original plan of control. The Commission would doubtless run into the thorny problems of fair valuation of properties and fair rate of return, which have been encountered in other fields of regulation. And there might be some question whether the final result would be control over monopolies by the Commission or control over the Commission by monopolies. Nevertheless, an attempt to regulate monopolies by commission might be far preferable to leaving them to operate in more or less unhampered fashion. Finally, if the regulation of monopolies is deemed unfeasible or proves ineffective, we may find it necessary to introduce direct governmental ownership and operation of certain industries which apparently belong in the monopolistic form on the basis of efficiency and cost.

If an industry is already organized in the monopoly form and is thought to be exploiting the consumers pretty thoroughly, but if it is not certain that the monopoly form of organization is justifiable on the basis of efficiency and cost, then the government might set up and operate "yardstick plants" in the same industry. If these plants could be established with facilities transferred from other fields of production in which chronic surpluses existed, so much the better. The yardstick plants would produce the same products as the monopolized industries and would sell them, as nearly as possible, on the basis of cost of production. In this way, it would be hoped, the prices charged by the erstwhile monopolies would be beaten down, the exploitation of consumers would be stopped, and private enterprises might even be induced to enter the same fields.

Conclusion. Apparently, then, an effective attack on the monopoly problem involves a comprehensive set of measures, and we may wonder whether any federal administration would ever find it politically feasible to adopt such a far-reaching group of policies. Indeed, having seen what it would involve, we may well wonder whether we want an effective attack to be made on the monopoly problem. If we do, the means are available and it is not too late to start. The result of the program, we hope, would be both relief from the monopoly problem and the continued operation of our economic system on the basis of capitalistic institutions and price relationships.

1. Distinguish between business combinations and monopolies. What is the significance of this distinction? Explain.
2. Explain the principal characteristics of the pool and the trust as types of monopoly organization.
3. How important were monopoly organizations in the United States as of 1904?
4. What are some examples of complete or almost complete monopoly control in American industry at the present time?
5. "The dominant concerns in many American industries are either holding companies or mergers." Explain.
6. Show how monopoly conditions may exist in an industry even though there is no one firm or formal combination of firms which controls all or almost all of the industry's productive capacity.
7. What is the importance of price leadership, basing-point systems, patent pools, and market-sharing in connection with modern monopolies? Explain.
8. "The operation of trade associations may or may not result in monopoly conditions." Explain.
9. When monopolies are highly successful, is the reason usually found in the fact that they are able to achieve greater efficiency in production than other business units? Explain.
10. What have been the usual effects of monopoly control on the prices of the products sold by the industries in question?
11. How have monopolies employed unfair competitive tactics in acquiring and maintaining control over certain industries? Explain.
12. On what grounds may monopolies be charged with contributing to business instability?
13. Indicate the extent to which corporate wealth, income, security ownership, and savings are concentrated in the United States today.
14. Is there any evidence that large industrial and financial concerns cooperate for purposes of economic control? Explain.
15. Why is it sometimes charged that large industrial and financial concerns attempt to control the government and the press?
16. How did the Sherman Act of 1890 attempt to deal with the monopoly problem, and with what success? Explain.
17. Explain the meaning of the "rule of reason" and its importance in connection with the enforcement of the Sherman Act.
18. What were the principal provisions of the Clayton Act of 1914? How was this Act related to the Sherman Act?
19. Describe the chief powers given to the Federal Trade Commission by legislation passed in 1914. Has the Commission been able to exercise these powers effectively? Explain.
20. What was the status of the anti-trust laws under the N.R.A.?
21. What was the effect of the N.R.A. on the monopoly problem in the United States? Why?
22. Show how laws, such as the Robinson-Patman and Miller-Tydings Acts, have had a bearing on the monopoly problem in recent years.
23. Comment on the enforcement of the anti-trust laws in recent years.
24. Has the government's program for dealing with the monopoly problem been successful, on the whole, up to the present time? Explain.

25. What should be our future policy with regard to monopoly? Explain.
26. Indicate some of the measures which should be included in a really comprehensive anti-monopoly program.
27. "One important thing which the government should do in connection with an anti-monopoly program is to stop supporting monopolies through policies of its own." Explain.
28. How could the enforcement of the anti-trust laws be strengthened?
29. Indicate some of the problems involved in the direct regulation of monopolies through a commission.

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Socialism and Communism

SOME PEOPLE FEEL THAT IT IS USELESS TO ATTEMPT, AS WE HAVE DONE, TO deal with economic maladjustments, such as the problems of banking, agriculture, and transportation, as separate and distinct matters susceptible of solution without reference to other problems. To these people it appears that such problems are merely symptoms which indicate that our competitive, capitalistic economic system is already, or is rapidly becoming, unworkable. If this is true, the attempt to treat these symptoms individually is doomed to failure. Those who hold this view, whom we call collectivists, believe that our traditional economic system should be abandoned and some type of planned economy substituted for it. In the present chapter we shall examine in some detail the principles, and the outstanding points of strength and weakness, of two of the principal types of collectivism.

COLLECTIVISM IN GENERAL

The Characteristics of Collectivism. Before considering socialism and communism as specific types of collectivism, we may list the characteristics which seem to be common to all types of collectivism. They are, according to one writer: "First, a condemnation of the existing political and social order as unjust; second, an advocacy of a new order consistent with moral values; third, a belief that this ideal is realizable; fourth, a conviction that the immorality of the established order is traceable not to a fixed world order or to the unchanging nature of man but to corrupt institutions; fifth, a program of action leading to the ideal through a fundamental remolding of human nature, or of institutions, or both; and sixth, a revolutionary will to carry out this program."¹

The Condemnation of Capitalism—Distribution. In their indictment of our present economic system, the supporters of collectivism achieve a high degree of accord. To them, one of the most objectionable features of the present system is the existing inequality in the distribution of wealth and income. We have commented, in earlier chapters, upon the evils which result from economic inequality. It leads to the misdirection of production

¹Oscar Jaszi, in *Encyclopædia of the Social Sciences*, New York, The Macmillan Company, 1935, vol. xiv, p. 188.

by consumers, and prevents the maximization of want-satisfaction from the goods which our system produces. It leads to inequality before the law, and inequality in influencing legislation and in political activities generally. It may also be an important factor contributing to business depressions. The collectivists are quite dismayed by the misery, suffering, vice, and crime which exist in the low-income groups, and by the luxury, waste, and extravagance indulged in by those with huge incomes. They object not merely to the extent and effects of inequality, but also to the way in which the inequality in income distribution comes about. They bemoan the fact that most people under our economic system must work long and hard for a miserable pittance, while a comparatively few favored individuals, through their ownership of land and capital, enjoy handsome incomes, often without lifting a hand in work of any kind. They condemn private property in land and capital, and believe that incomes should be paid solely on the basis of personal services rendered in production.

The Ineffectiveness of Production. Quite apart from their attacks upon present-day distribution, the collectivists have much to say about the wastefulness and ineffectiveness of capitalistic production. It is charged that there is much waste through competitive duplication of productive facilities and human labor. Collectivists delight in describing, as examples of this waste, competing gasoline service stations which often occupy three, and sometimes all four corners of busy intersections, although they sell products which are highly similar; and the half-dozen milk wagons of different companies which patrol a given city street, each serving a few consumers with dairy products which are substantially the same. Considerable waste of human and material resources also results from competitive advertising and salesmanship, which often lead merely to the transfer of customers from one competing company to another without serving any genuinely useful social purpose. Operating under the influence of self-interest and freedom of enterprise, business men, in selecting a line of production, are much more likely to consider the possibility of profits for themselves than the welfare of society. Hence, as the collectivists point out, productive resources are wasted in turning out trivial, useless, or even harmful products, while important human wants are left unsatisfied.

The Breakdowns of Capitalism. Not only is the capitalistic economic system said to be wasteful and inefficient when it operates, but it is subject to periodic breakdowns, commonly called depressions, with economic activity at low ebb, though human wants are far from being satisfied. Although some of the conditions leading to depressions might be corrected without destroying the system, the collectivists feel that these depressions can never be completely eliminated under capitalism, for they hold that depressions are inherent in the very nature of a capitalistic system. Economic activity under capitalism is said to be chaotic and planless. The individual is left relatively free to produce what he chooses, when he

chooses, and as much as he chooses, without reference to what other producers are doing or the public need for the product. With hundreds or thousands of producers operating in this fashion in an industry, there is little chance that exactly the proper amount of a good will be turned out year after year, or that the output of one industry will be properly adjusted to that of others. Periodic maladjustments and breakdowns appear to be unavoidable in such a system.

Moreover, the collectivists commonly hold that in a capitalistic system there is bound to be conflict between individual and social interests. It is to the interest of society to have every economic good produced in abundance until consumers' desires for the good are completely satisfied; but it is often to the interest of producers to restrict production, raise prices, and even to gain monopoly control for the purpose of increasing profits. Profit for society can result only from abundance, but profit for given producers comes often from scarcity and high prices; for if a producer can make his product relatively scarce, he can often command more of other products in exchange than he could secure by maximizing his own output. Thus, in a capitalistic system, the interests of society may suffer.

This conflict between individual and social interests manifests itself especially clearly after a long period of prosperity, marked by increasing production and rising prices. As the period of prosperity continues, some enterprisers appreciate the fact that it will be impossible to keep on producing increasingly larger quantities of goods and selling them at steadily rising prices. Hence, they begin to retrench in anticipation of a period of poor business. They lay off some workers, or put them on part time, and cut down their purchases of materials and supplies. Thus they reduce the purchasing power of laborers, farmers, and others, and the business of enterprisers in general falls off. They, in turn, react by further restriction of production and discharge of workers, and finally the business depression arrives in earnest. It should be noted that it is not to society's interest to have production restricted at such times. Consumers' wants for various kinds of economic goods have not declined. Society as a whole wants and needs to have production continued, or even increased, but private enterprisers, owning land and capital and faced with the actual or prospective disappearance of their profits, follow their own self-interest and retrench. In trying to protect their own interests, enterprisers may in this way do society a very ill turn. The collectivists contend that if society owned the land and capital and if business men worked for society for wages instead of profit, the situation would be vastly improved.

The Doctrines of Karl Marx. A considerable difference of opinion has existed among collectivists as to when and how collectivism will arrive. In some quarters, collectivism is regarded as an ideal future state, to be attained only through extensive preparation and hard work. On the

other hand, collectivism was regarded by Karl Marx and his followers as a system which will inevitably evolve out of capitalism, and which is already on the way whether most people realize it or not. The doctrines of Marx have had such a profound influence upon the advocates of collectivism that we must examine them briefly.

The Economic Interpretation of History and the Class Struggle. Karl Marx held that economic matters are dominant in determining the course of history and that the form of government, family system, moral standards, and literature of a society are but reflections or by-products of economic activities and institutions. An important feature of capitalism, according to Marx, is the continuous class struggle. The two opposing classes are called by different names at different times in history, he said, but the struggle goes on all the time. The class struggle at present is supposed to be between the capitalist (or owning) class and the proletariat (or working) class.

Value and Surplus Value. Prominent among Marx's theories were those relating to value and what he termed "surplus value." He held that all commodities, regardless of differences in size, shape, composition, and usefulness, contain a certain common element; that is, the labor used in producing them. Capital, though useful in production, he regarded merely as past labor congealed in a more or less permanent form. The values of commodities in terms of each other depend upon the amount of socially necessary labor contained in them. For example, a commodity that takes twice as much socially necessary labor to produce as another commodity has twice as much exchange value.

From this theory of value, Marx derived his explanation of the method by which workers are exploited by capitalists. Under capitalism, the workers cannot work for themselves because they are unable to acquire the land and capital needed in production. Consequently, they must work for the capitalists who own these material means of production. As a condition of employment, the workers must turn their products over to the capitalists who are free to sell them for whatever they will bring, which will be an amount proportionate to the labor contained in the products. On the other hand, the wages which the capitalists pay to the workers need only be high enough to maintain the laborers and their families, and to permit them to raise enough children to take their places. The difference between the value created by the workers in production and the wages paid to them is called "surplus value," and goes to the capitalists as an unearned increment. The workers cannot refuse to make this bad bargain, because they are dependent upon the capitalists for a chance to work and because in a capitalistic system there is always a reserve of unused laborers waiting to take the places of those already employed. In this exploitation of the workers and appropriation of surplus value by the capitalists lies the cause of the class struggle.

The Concentration of Capital and Expropriation of the Capitalists. According to Marx, the thirst of the capitalists for gain is so great that they seize every possible opportunity to increase the amount of the surplus value. This leads to increasing misery and suffering among the workers and to the formation of an ever larger labor reserve. Moreover, it brings about an increasing concentration of capital in the hands of a few individuals; for the large enterprisers are more efficient than the small ones, and force the latter out of business, taking over their land and capital. As this process goes on, society will become more and more the victim of commercial crises or depressions until finally will come that last crisis in which the proletariat will rise up, dethrone the capitalists, and operate the material means of production in their own interests. Eventually will come a classless order in which all workers will share the income of society and the state will dwindle away—for Marx regarded the bourgeois state as an instrument for protecting the owning class in its favored position.

Criticism of the Marxian Theories. Marx wrote three large volumes to elucidate and elaborate his theories, and many books of criticism of his theories have appeared since his time. However, we shall be able here merely to suggest why his theories have been very largely discredited. First of all, the idea that all of man's activities can be explained in terms of his economic activities and institutions is based upon an overemphasis of the economic aspects of life. History must certainly take economic matters into account, but there are many human actions which cannot be explained wholly on economic grounds. As for the class struggle, it is obvious that there are differences between capital and labor and that their relations might be loosely termed a struggle. However, this struggle is not the only, or necessarily the most important, feature of the capitalistic system. Marx, thinking of the proletariat as an ideal theoretical class, attributed to the workers a unity of purpose and action which they do not possess. Workers have varied interests, many of which are not economic in character. Moreover, there is little reason to suppose that workers always act in accordance with their economic interests, to the exclusion of interests of other kinds. It must also be remembered that there are economic differences between different classes of labor, and these differences *in degree* may sometimes be quite as important as the difference *in kind* that exists between capitalists and laborers.

The Marxian theory of value has also been sharply and successfully attacked. According to Marx, the only element common to things which have exchange value is the labor contained in them. This contention led him to say that articles of wealth which have not been produced by human labor have *use value*, but not *exchange value*. However, as we know, natural resources which are in no sense the product of human labor have exchange value just as truly as have the economic goods produced by

human labor. Marx never demonstrated that the value of a commodity depends upon the amount of labor contained in it. He merely attempted to show that there could be no other element common to different commodities—and this is by no means the same thing. Marx also overlooked the element of utility in connection with exchange value. His analysis of value was incomplete in that it approached the question of value entirely from the side of supply. For it should be clear that utility is an element common to all goods which have exchange value, and an element which plays an important rôle in the actual pricing of commodities in our economic system.

The theory of surplus value, also, has fared badly since Marx's time. In explaining surplus value, Marx divided capital into two parts. He said that constant capital (which we would today call fixed capital) consists of such things as machinery and buildings, and is not a source of gain to the capitalist, since this capital merely reproduces itself in the value of the things produced. He regarded variable capital, used to pay wages, as the source of the surplus value and the gain of the capitalists. But if, as Marx thought, all gain to the capitalists comes from variable capital and not from constant capital, it is difficult to understand why capitalists should introduce machinery into their industries or make use of increasing amounts of fixed capital. For the greater the quantity of fixed capital goods used, the less would be the gains in the form of further surplus value. The rate of gain to capitalists would be highest in industries using much labor and little fixed capital, and lowest in industries using little labor and much capital; and yet Marx's prediction of revolution was based upon the growth of a great army of unemployed labor, which supposedly was to result from an increasing use of labor-saving machinery.

In describing the return received by the capitalists as a surplus value filched from the laborers, Marx overlooked the element of time and the important function of waiting performed by those who save and thus make possible the formation of capital. He also largely disregarded the important administrative and managerial functions which are often performed by capitalists. Finally, he failed to explain why the capitalists, under competition—since they were making a large gain from each worker used—did not bid against one another in the attempt to hire more of these profitable laborers until they reached the point at which the contribution of the marginal worker to production equaled, and only just equaled, the wages which had to be paid to get his services.

It would seem that Marx was not an especially good prophet, if we may judge by subsequent events. The population has not become divided into two distinct classes, bourgeoisie and proletariat. Instead, a large middle class has continued to exist, and there are surveys which show that most individuals, whether relatively well-to-do or poor, consider themselves

members of the middle class. Under the development of the corporation and industrial combinations, there has been a considerable concentration of capital, but the concentration of *control* over capital has been more pronounced than that concentration of *ownership* which was so prominent in the Marxian analysis.

The lot of the workers has not been one of increasing degradation, misery, and squalor, in an absolute sense, since Marx's time. It is true, of course, that for some years following the Industrial Revolution the trend in the condition of the working class seemed to be in that direction; but labor organization and governmental intervention in the form of labor legislation and social insurance—measures in which Marx had no faith—have helped to reverse this trend. However, it is possible to argue that workers have become relatively worse off, and that the disparity between rich and poor has increased since Marx's time. For some years we have had a reserve of idle labor and this reserve has been large in times of severe depression, but it has hardly reached the proportions predicted by Marx.

Business depressions have probably increased in severity, in the absolute sense, as our economic system has become more extensive and more complex, but it is not clear that they have become relatively more severe. Finally, the time when all material means of production will be owned by a few, and the militant masses of the population (the proletariat) will rise up in their might and destroy these few capitalists, does not indeed appear to be imminent.²

THE ELEMENTS OF SOCIALISM AND COMMUNISM

Having described briefly the indictment which collectivists bring against the capitalistic system and their basis for hoping that it will be replaced by a different type of economic order, we now turn to a consideration of the characteristic features of socialism and communism. The terms "socialism" and "socialistic," like the word "inflation," are very loosely used in everyday conversation. Some people regard as socialistic every extension of governmental functions, even though the new functions are calculated to uphold and strengthen the existing order and thus lessen the probability of the adoption of a different type of system. Some, indeed, are inclined to view as socialistic any governmental activity, old or new, which apparently does not serve their own particular interests, and to stamp as a socialist any person whose views on economic matters differ from their own. The term socialism, to us, means an economic system in which the

² For a brief but searching analysis and criticism of the doctrines of Karl Marx, the student may well read Alexander Gray, *The Development of Economic Doctrine*, New York, Longmans, Green & Company, 1931, pp. 293-329. This work has been helpful in the preparation of this brief summary of the theories of Marx.

material (that is, non-human) means of production are owned and managed by society. Communism includes all of this and a good deal more. For under communism consumers' goods would be collectively owned and arbitrarily distributed among the populace, in addition to land and capital being owned and operated collectively.

The Collective Ownership of Land and Capital. Under both socialism and communism, then, the material means of production—that is, land and capital—would in general be owned by society and not by private individuals. But this does not necessarily mean that *all* land and capital would be owned by society. Individuals might be allowed to own plots of land as home sites, and even to own the land and capital needed in the operation of small business enterprises, such as shoe-repair shops and corner stores. Some socialists question that it would be wise for society to try to own and operate the land and capital used in agriculture, which is so largely a decentralized industry. Individuals would certainly be allowed to own such goods as lawn mowers and washing machines with which to perform services for themselves; and it would be exceedingly difficult to prevent people from performing similar services for others for pay, or from hiring these goods to others on a rental basis. An insistence on the complete and absolute ownership of land and capital by society would probably weaken, rather than strengthen, the socialist position. However, the essential fact remains that, under socialism, the land and capital used in all major industries, with the possible exception of agriculture, would be owned by society, and private individuals would no longer receive rent and interest for the use of these productive agents.

Opinions differ as to the method by which land and capital would be brought under the ownership of society. It is sometimes suggested that the present owners should be expropriated by violence and revolution. In general, it is probable that communists incline more strongly toward this point of view than do socialists. Many people realize, however, that such measures, while they might bring quick and thorough results, are subject to grave dangers. They are likely to repel all who are motivated by humanitarianism. Moreover, to cut down ruthlessly the present owners of land and capital would deprive society of some of its most capable executives and administrators. And if revolution were attempted but failed, society might well swing to the opposite extreme so that collectivism would be impossible for many years to come; but a failure to achieve collectivism by democratic processes at any one time might be followed by success a little later. Finally, if revolution resulted in a stoppage or breakdown of economic activities for any considerable period of time, an indescribable amount of suffering and loss of life would almost certainly result.

For these and other reasons, it seems that socialism, if it is to come, should await the time when a sufficient number of citizens appreciate its

merits so that it can be voted into existence. But, in any event, if the land and capital are to be acquired by society, there will remain the question of whether confiscation or purchase is the better method of procedure. In general, purchase appears to be sounder than confiscation. Of course, the compensation of present owners would perpetuate, for a time, the great inequalities in wealth and income to which socialists object so strenuously. However, since the lump sums or annuities which might be granted to the present owners would not be transferable to their heirs, this problem would be a temporary one.

The Collective Management of Land and Capital. Opinions differ, also, as to the best way to manage the socially owned industries. Some collectivists think that the central government should assume direct responsibility for the management and operation of all of the socialized industries. Others hold that management should be vested in trade unions, syndicates, or even in modern replicas of the medieval guilds. In any case, the central government would have to supervise in general the operation of the entire economic system, for there are some functions which could hardly be performed by any agency other than the central government.

Such duties would probably be performed by a governmental commission, or commissions. It would be necessary for the central agency to collect and study a great mass of statistical information relating to natural resources and other factors of production, to the wants of consumers for different kinds of economic goods, and to the extent to which these wants are currently being satisfied. This agency would have to make decisions, based upon the expressed will of the people, as to which industries should continue to operate and which, if any, should pass out of existence. It would have to decide how much of each industry's product should be made in each period, and coordinate the production of the different industries of the country so that the national income as a whole would meet the needs of this socialized people.

The Distribution of Income. An important problem under socialism or communism, as under capitalism, would be the distribution of the national income. Should economic goods be distributed directly among the citizens or should the members of society be given money incomes with which to buy such goods as are available? The communists believe in the collective ownership of consumers' goods, as well as capital and land, and would have these goods distributed directly among the people. Socialists, on the other hand, are more kindly disposed toward the use of money and the exercise of choice on the part of consumers.

Once the *method* of distribution has been decided, it becomes necessary to formulate a *principle* of distribution. Shall the national income be divided equally among the income-receiving citizens or shall there be differences in incomes, and if there are to be differences upon what basis

shall the differentiation be made and to what extent? Some socialists contend that all should share alike, although it is not always clear whether this means an equal share for every man, woman, and child or equal shares as between families. Sharing equally would probably mean, to these socialists, the equal sharing of money income, while real income would vary in composition from one individual or family to another. Many socialists recognize the difficulties of getting people to work hard, or to take the more responsible and important positions in our economic system, if all persons are to have equal incomes; and consequently they advocate that there be some variations in income as between individuals, based upon differences in ability, or efficiency, or both. However, most communists, and some socialists, hold out for an entirely different principle of distribution, urging that individuals should contribute to production on the basis of their ability and receive income on the basis of their needs. This might mean that those who contributed most heavily to production would draw the smallest incomes because their needs were slight. In general, we may consider the principles of equal distribution and of distribution according to needs, as ideals rather than practical proposals. In practice, a collectivistic economic system would probably have to tolerate an unequal distribution of income based upon the productivity of its citizens.

One thing seems certain, however. The degree of economic inequality which would exist would be very small as compared with that which we have today. Since society would own the land and capital, private individuals would not receive, under socialism or communism, any incomes from rent and interest. Of course, different pieces of land would vary in productivity under collectivism as under capitalism, but the fruits of these variations in productivity would be spread over society as a whole, whereas now they go to a relatively small group of landowners. Similarly, a collectivist society could not do without capital goods, but these goods would be furnished by society as a whole and the rewards for saving and waiting would be reaped by society as a whole. Since industries would be run by society, the enterprisers and managers would be servants of the state and would be paid a stipulated wage; they would not, of course, receive any income in the form of profits as at present. All income would be distributed in the form of wages, except that provision would have to be made, in some way or other, for those who were unable to contribute to production. While differences in income would probably be permitted on the basis of efficiency and ability, we may be quite sure that even the most important executives and managers would not draw incomes of \$100,000 to \$1,000,000 a year as some do at the present time. But wages *in general* would, under socialism or communism, be considerably higher than at the present time; for every worker would have in-

cluded in his wage his share of social rent and interest, in addition to the payment made for his labor.

Saving and Capital Formation. While socialism or communism would eliminate most competition, as we now know it, and would greatly limit the institution of private property, we must not assume that either form of collectivism would turn its back upon all features of a modern capitalistic economic system. Production would doubtless continue to be roundabout, large scale, and specialized in character, and would require large and increasing amounts of capital. Since collectivists frown on the receipt of interest by private individuals, the question may be asked as to how the necessary capital would be provided.

Capital formation, it will be recalled, depends upon saving. Under our present system, certain individuals must refrain from consuming to some extent, and must, in effect, elect to buy capital goods instead of consumers' goods with a part of their money incomes, if capital formation is to take place. In other words, in any society, the cost of obtaining capital goods, which will help to create a more abundant life in the future, is found in the necessity of getting along with a smaller quantity of consumable products at present than could have been obtained if the creation of capital goods had not been undertaken. In a collectivistic society, decisions as to how much to save would not be left, as at present, to private individuals motivated by the prospect of interest. Instead, the central authority would decide how much should be saved, and would carry out its decision by directing the use of a certain part of society's land and capital in the production of capital goods rather than consumers' goods. In this way, all the people would help to bear the cost of providing capital goods by having to put up with smaller real incomes currently than they would otherwise have received; and later on, when society's productivity had been enhanced by the use of this capital, presumably all would share in the greater national income.

Money and the Price System. Another pertinent question has to do with the extent to which a socialistic or communistic economic system would make use of money and the price system. Under communism it may be assumed that money and prices would not be used. Consumers' goods, when produced, would belong to society, as well as land and capital, and the consumers' goods would be distributed directly among the people in some arbitrary fashion, so that money and prices would not be needed. Labor would have to be directed arbitrarily into the proper occupations, unless we may assume that the better nature of men would cause them, under communism, to select the occupations in which they would be most useful to society. Similarly, society as a whole, through its representatives directing the system, would have to decide what goods should be produced, and in what quantities.

While some socialists have favored the use of labor certificates or

similar substitutes for money, most socialists are at present resigned to the use of money and to some dependence upon prices. For one thing, prices would probably be used under socialism to direct the labor supply into the desired occupations. Land and capital, being owned by society, could be arbitrarily distributed among different industries and occupations without any great harm being done. The labor supply, however, is made up of human beings who have home ties and other associations which would make it undesirable for the central authority to shunt them from one occupation to another and from one part of the country to another in an arbitrary fashion. Consequently, socialism would probably rely upon differential wages, as far as possible, to get labor to move from one industry to another and from one locality to another in order to keep the labor supply distributed in accordance with the changing needs of society. Thus, if more workers were needed in baking bread and fewer in producing motion pictures, the wages of bakers would be raised and those of motion picture workers lowered, until workers had shifted from one occupation to the other in desired numbers, or at least trained their children to become bakers rather than actors, directors, or cinematographers.

A socialistic system would probably also depend upon prices, to a considerable extent, to get the products of industry rationed among the people as consumers. The use of prices is probably the best way to allow consumers to choose what they will consume and to permit a variation in the composition of real income as between individuals. Since society would control both the total amount of money to be given to citizens and the prices at which products would sell, it should be quite possible to distribute the output of industry among the people while giving them considerable freedom of choice. The total amount of want satisfaction derived from the national income would probably be much greater, with the use of prices and the exercise of freedom of choice, than it would be if goods were rationed directly to the consumers in certain fixed quantities.

However, a socialistic system would rely less extensively than a capitalistic system upon prices. We have already seen that socialism would not depend upon prices to govern the total amount of saving and investment, or the distribution of land and capital goods among the several industries. Moreover, it would not allow prices to determine what to produce and in what quantities. The fundamental relationship now existing between prices and costs of production, under competitive conditions, would largely disappear under socialism. Since land and capital would be owned by society, any charges made to industries for the use of these agents would be purely arbitrary. Wages would be determined by the central authority as would also the prices of finished products. Under these conditions,

there would be no necessary relationship between prices and costs of production.

Let us suppose, for example, that an article produced under socialism did not, at a price equal to "cost of production," sell in the quantity in which it was being produced. Under capitalism this situation would be expected to lead eventually to a restriction of the productive capacity of the industry and a consequent reduction of output. Under socialism the output might be maintained or even increased if the central authority thought the commodity should be widely consumed by the people. Any "loss" on this article could be covered by selling other, less essential goods at prices higher than their alleged cost of production. Similarly, the ability to charge a price higher than cost of production for an article provides, under capitalism, an incentive to increase productive capacity and output but this would not be true under socialism. Capacity and output would be expanded only if this course of action appeared socially desirable for other reasons. Prices and costs under socialism would be used merely as bookkeeping devices to aid in planning production to meet the needs of the people, and in checking up on the degree of efficiency with which plans were carried out. They would be purely arbitrary amounts, as determined by the central authority. The price system, thus administered by the peoples' representatives, would be the servant of society and not its master.

POSSIBLE ACCOMPLISHMENTS OF COLLECTIVISM

The Wastes of Competition. Such are the features which would probably characterize a collectivistic economic system. We must now attempt to see what gains the collectivists feel would be realized in the way of increasing human welfare, through the adoption of collectivism. In the first place, collectivists are convinced that a system of this kind would eliminate most of the wastes of competition. Since production would be socially controlled, there would be little danger of competitive duplication of productive facilities and human efforts such as mark capitalistic economic systems. Every industry would be organized into productive units of the most efficient size, and no more units would be set up than were needed to turn out the socially desirable amount of goods. Advertising, if it existed at all, would be used for strictly educational and instructive ends. With production organized for use and not for profit, there would be little danger that productive agents would be used to make trivial goods so long as important human wants remained unsatisfied, or that industries which produced useless or harmful goods would be tolerated. Since production would be organized with the interests of society at heart, collectivists believe that human wants as a whole would

stand a much better chance of being completely satisfied under collectivism than under capitalism.

Individual and Social Interests. We have already said that, in a capitalistic system, the interests of individual enterprisers often lead to the limitation of certain types of goods, while the best interests of society as a whole require these goods in abundance. This conflict of interests, collectivists say, would be eliminated under collectivism. Those who managed and directed the affairs of industry, being merely employees of society and unable to make profits for themselves under any circumstances, would have no incentive to restrict production in any industry. Their interests, like those of society, would be best served by producing in abundance. Moreover, it is said, collectivism would provide a remedy for the present practice of delaying the introduction of new inventions, in the interest of large profits, and consequently the best equipment and methods would be promptly available for all productive units.

It is argued, also, that the ordinary workers in industry would be more efficient under collectivism. Since they would be working for society instead of profit-seeking private enterprisers, they could count on getting their full share of the national income. As a result, labor unrest, strikes, boycotts, and other types of labor troubles should disappear. And since there would be work for all, and no fear of unemployment, there would be no incentive for workers to "soldier on the job" to make their jobs last, or to oppose the introduction of scientific methods, improved machinery, and labor-saving devices. By removing the greater part of the present conflict between individual and social interests, it is held, collectivism would contribute greatly to the efficiency of production.

The Elimination of Business Depressions. Under either socialism or communism, it is said that business depressions would be unknown. The supply of purchasing power under socialism would be completely controlled by the central government and would never be allowed to operate, as it sometimes does under capitalism, as a force making for business booms and depressions. Production would no longer be planless and chaotic, because decisions as to what and how much should be produced would no longer be left to thousands of independent and uncoordinated individuals as under capitalism. Final decisions of these kinds would be made by the central authority, and misdirected production would not occur unless the central agency made mistakes in gauging the desires of consumers or were unable to meet these desires. Since production under collectivism would still be roundabout in character and would still be undertaken for a future market, it would be quite possible for misdirected production to occur. However, with the selling prices of products completely under control of the central authority, it would be possible to induce consumers to take an unusually large output of some good off the market by lowering the price sufficiently or to restrict the consumption

of another good, limited in quantity, by raising the price. Since costs and prices would mean little in such a system, misdirected production, when it occurred, would not be a force making for economic depression.

Moreover, under collectivism there would never be an incentive to close down an industry or to reduce its output, unless the desires of consumers for its products were completely or very nearly satisfied. In other words, the time would never come under collectivism, as it does under capitalism, when business uncertainties could cause managers to discharge workers or put them on part time, to reduce purchases of materials and supplies, and to take the other steps which today lead to the vicious downward spiral of depression. Business managers, under collectivism, would be working for society, would not receive profits in any event, and would never reduce production unless instructed to do so. Thus, it is claimed, business depressions would under collectivism be only a bitter memory.

The Employment of Labor. It is contended that under collectivism there would always be employment for all persons able to work, while generous provision would be made for those unfortunate individuals who were unable to contribute to production. In fact, all who were able to work would be required to do so in order to receive any income. Under capitalism, the ability of workers to find employment depends upon whether those persons who control land and capital can make a profit by using the workers. Under collectivism, with land and capital owned by society, workers could always be used with profit to society so long as human wants were not completely satisfied. The cost of putting laborers to work in a given line of production is, from the social point of view, only the necessity of providing them with land and capital which could otherwise be used to produce other goods. In short, the only costs would be opportunity costs, and there would be plenty of employment for labor as a whole. And if society ever managed to produce more than enough goods to satisfy the wants of consumers, it would reduce hours of work for all citizens and allow all to enjoy more leisure time. There would still be employment for all.

Saving and Investment. Finally, it is contended that the twin processes of saving and investment would be much better coordinated under collectivism than under capitalism. Under the latter system, people often desire more funds for investment in industry than are currently being saved, so that the banks have to create extra purchasing power for investment purposes. At other times, savings pile up in our financial institutions and cannot find profitable investment. These evils, it is claimed, result from leaving these processes in the control of private individuals who react to price considerations. The processes not only are carried on wastefully, but they have important repercussions in connection with business cycles. Under collectivism, saving and capital formation would mean

merely that society would choose to direct a part of its productive resources into making capital goods rather than consumers' goods. Society would not be so silly as to deprive the people of consumers' goods at a given time unless there were a real need for further supplies of capital goods; and, on the other hand, society could always withhold from its citizens enough consumers' goods to make possible the creation of any required amount of capital goods, however large. Thus, saving and investment would really be a single process under collectivism.

CRITICISMS OF COLLECTIVISM

In considering the possible failures and weaknesses of collectivism, we turn first to the question of production on the basis of economic planning. Since the productive system under collectivism would make use of many capitalistic *productive methods and principles*, the basic issue in production concerns the probable effectiveness of *planned control over production* as compared with *control by the market and price mechanism*. In this connection, we are concerned with two matters: (1) the extent to which the results of planned production, if these results were attained, would meet the basic needs and desires of the people, and (2) the extent to which collectivism might be able to carry through successfully the program set up by the planning agency.

Difficulties of Economic Planning. On the first of these points, we cannot freely accept the conclusion of collectivists that planned productive results could scarcely be worse than those of unplanned capitalistic production. It is true, as we have suggested, that planned production would have some advantages over capitalistic production, but these do not include a guaranty that the results of economic planning, even if fully achieved, would be perfectly adapted to the basic needs and desires of the people—for planned production would have some difficulties which are distinctly its own. Under collectivism, many important economic decisions—such as the kinds and quantities of goods to be produced, the distribution of existing productive agents among industries and enterprises, and the sound allocation of productive resources in satisfactorily meeting the needs for present consumption and yet providing adequately for capital formation—must be made by the economic planners. These planners could not, of course, rely on the customary capitalistic guides of prices and costs in making these decisions; for prices and costs, if they existed at all, would not under collectivism be determined in a free market, but would have to be determined by a few planners and not by thousands or millions of persons bargaining independently as is normally the case in a capitalistic society.

Under these conditions, the important economic decisions would be made *arbitrarily* rather than *rationally*, in that they could not be based

on prices and costs as independent data. If the government (representing the people as a whole) is the sole owner and demander of productive wealth, there can be no real price determination for land and capital, hence no rational computation of costs, and therefore no rational allocation of these productive agents to the various industries of the economy. Furthermore, if the managers of collectivistic industries have no great discretionary powers and little financial responsibility in connection with production, rational risk-bearing by these managers is out of the question.

Arbitrary decision-making by the economic planners would be a considerable obstacle to the adaptation of production to basic human needs and desires. The planners would know, of course, that a large amount of a good is usually preferable to a small amount, but, having decided to produce a given quantity of a good by using given quantities of the productive agents, they could not be sure that this quantity of the good would give more satisfaction, in relation to its cost, than would the quantity of some other goods which could have been produced with the same amounts of the same agents of production. As the result of planning, a given quantity of a good would be produced and offered for sale at a given price, and the planners would observe that the consumers either did or did not eagerly purchase and consume it. But this knowledge would not be very helpful, since the demand for a particular good at a particular price, when other goods were not available or were available only in small quantities at high prices, would be quite different from the demand for this good when other goods were available in large quantities at low prices.

Again, if the planners had the choice of ordering the production of an economic good by either of two methods, each of which required a different combination of the agents of production, they could never be sure which method should be used. They might know and decide to adopt the method which produced the greater quantity of product, but they could not be certain that this method was actually superior on the basis of costs. Or if the planners were faced with the choice of two methods of producing a given good and knew that one method would produce a given amount of it after six months of preparation, whereas the other method would turn out a *larger* quantity after three years, the planners would be unable to make a completely rational choice between these alternatives in the absence of a market-determined rate of interest. They would certainly be expected to take the time factor into consideration, but again they could never be sure of the quality of their decision. In similar fashion, they could observe whether the people as consumers registered satisfaction or dissatisfaction over the planned decisions with respect to saving and capital formation, with the resultant limitations on currently available consumers' goods, but they could never be sure just how good or bad their decisions had been on the basis of the time-preferences of the individual people.

These considerations seem to indicate that, even in the absence of certain capitalistic shortcomings in the field of production, there would be ample opportunity for the total results of planned production to fall short of perfection in the matter of adaptation to human needs and desires. Nor is this the whole story, for we have thus far been assuming (1) that the planners are men of good will who struggle manfully to fulfill the desires of the people, and (2) that the total productive results attained are actually those which were planned. If the planners were proud in their wisdom and decided that they knew what the people wanted, or should have, better than the people themselves knew, the results of planned production might be most unsatisfactory to the people. Such dereliction from duty on the part of the planners would presumably be short-lived if the government of the collectivistic system were truly democratic, for the planners could then be removed from office at reasonable intervals if the people were dissatisfied with the results that were being produced. However, if the government turned out to be a dictatorship, so that the planners were safe in their jobs as long as they pleased the dictator or a small group of leaders, the total results of planned production might be far worse, from the point of view of the needs and desires of the people, than those which are experienced in our capitalistic system. Thus, the question of democracy in a collectivist government is a very important one in connection with evaluating the probable results of planned production.

Difficulties in the Execution of Plans. Whether or not the economic planners were responsive to the will of the people, it could scarcely be expected that the actual results of planned production would be precisely those which had been planned. Even if the technical efficiency of governmental enterprises under collectivism could be maintained at a reasonably high level, the fact remains that some matters could not be controlled by economic planning. Even under economic planning, many phases of production would be subject to the influence of uncontrollable natural phenomena. For example, unusually favorable or unfavorable weather conditions would greatly affect the yield of certain crops, and indirectly the output of industries which were dependent on these crops for their supply of raw materials. Wars, or even changes in the outlook for peace, might cause actual production to vary significantly from the original planned estimates; and much the same thing would be true of technological improvements if they were introduced into industry about as fast as they were developed or discovered.

Moreover, it is not certain that the technical efficiency of production *could* be maintained at a high level under collectivism. The economic plans would have to predict the activities of millions of human beings, and the planners could never be confident that these people would behave exactly as they were expected to behave in various situations. If

the collectivistic system proved unable to furnish adequate incentives to individuals, the technical efficiency of productive activities might be seriously impaired. In summary, it does not seem possible to predict with great accuracy just how well the total results of planned production would compare with those of our capitalistic system. Certainly it is difficult to see that there is any great *assured* advantage for socialism in this respect.

The Distribution of Income. In spite of the communistic ideal of distributing income on the basis of needs, we have seen that the probable distribution of income under collectivism would feature moderate differentials between individuals on the basis of productivity. However, since individuals would no longer receive income from the ownership of land and capital, unearned incomes in general would be eliminated, and differences in income as between individuals would be very small in comparison with those which exist in our capitalistic system. These results, in and of themselves, would probably be approved by a rather large number of people.

The chief problem in connection with collectivistic distribution of income is whether the proposed moderate differentials in income would be consistent with the collectivists' desire to maintain and expand the total national income. That is to say, would the small differences in income which collectivism contemplates provide adequate incentives for all? If individuals under collectivism lacked incentive to work efficiently, to manage enterprises and industries efficiently, and to invent, contrive, and improve machines and methods of production, the total national income might fall well below that which is produced under capitalism. It is obvious that, if the total national income were too small, it could be divided ever so fairly and yet fail to provide a high level of economic welfare for the people.

With wages for ordinary grades of labor paid largely on a piecework basis, it is possible that differences in wages at the lower end of the collectivistic income scale would be about as adequate as they are under capitalism in providing incentives for ordinary workers. It is far less certain that the modest "upper-bracket" wages proposed by collectivists would be sufficiently high to induce managers and directors of large-scale governmental enterprises, inventors and research specialists, and high-grade professional workers to exert their best efforts. The collectivists obviously think that moderately high wages for such persons would work out satisfactorily, but this is a matter that can actually be determined only by experience.

The collectivists contend that individuals, regardless of the difficulty and responsibility of their work, would not object to being only moderately well off if there were no extremely rich people with whom they could compare themselves unfavorably. Collectivists do not expect individuals who were accustomed to receiving large incomes under capitalism ever to

be fully satisfied with the smaller economic rewards allotted for the same work under collectivism. But they say that as soon as a new generation has come along, composed of individuals who know nothing about the large income differentials which formerly prevailed under capitalism, people would work just as hard and efficiently for the small income differentials of collectivism as under any other system of rewards. However, these arguments are far from convincing.

In any case, the collectivists do not intend to rely entirely upon differences in wages to provide incentives to work. They intend to minimize the importance of economic motivation, while developing other types of incentives extensively. Among the motivating forces which would be emphasized are power, prestige, public honors and acclaim, pride in work, the joy of creation, extensive opportunities for education and training, jobs well fitted to individual abilities, pleasant and interesting work in advanced positions, the filling of advanced positions on a merit basis, relief from the dangers of social insecurity and unemployment, idealism, altruism, devotion to the cause, and ultimate compulsion and penalties.

Just how well this system of moderate differences in wages, combined with a host of other incentives, would work out in practice cannot be determined in advance. Fundamentally, the answer depends upon the question of whether people behave acquisitively under capitalism because selfishness and acquisitiveness are an inherent and unchanging part of their nature, or whether this behavior under capitalism is produced largely by environmental and institutional conditions peculiar to that system. While the final answer to this question will come only from experience in trying to run a collectivistic system, we incline to the view that such an economy might encounter serious problems in the field of incentives which would cause it to be torn between its desire for efficiency in production and its desire for equalitarianism.

Economic Stability. There is little doubt that the planned economy of collectivism would have some advantages over our capitalistic system from the point of view of economic stability. It should be possible to keep a planned economy operating after a fashion without severe breakdowns or depressions and unemployment. If the productive results which were planned could always be attained in practice, there would really be no problem of economic stability at all under socialism or communism; but, as we have seen, there are factors which might cause the actual productive results to vary substantially from the results that were planned. Under these conditions, depressions and unemployment might be avoided, but the advantages of a collectivistic economy in this respect would not be nearly so great as they seem at first glance to be.

Consider, for example, a simple possibility. In an economic plan, the production of coal, coke, and iron ore would have to be coordinated with that of steel, automobiles, tractors, and machinery; but in practice one of

the many things which might happen in any economy could keep the production of coal and iron ore from actually reaching anything like the planned estimates. What effect would this deviation from plan have on the steel industry, and other industries which require large quantities of steel? It seems clear that these industries, at least temporarily, would have some unused productive facilities and some unnecessary labor. But, say the socialists, these conditions will not be allowed to spread to other major industries, because any price adjustments that might be necessary will be made promptly and the purchasing power of workers in the steel industry and other industries using steel will be maintained.

This sounds reassuring, but what could the planned economy do for these workers? It could spread the work in the steel industry, and in other industries which use steel, by shortening hours of work while maintaining wage payments—but something of this sort could be done even under capitalism. If, as seems more logical, some workers were temporarily displaced from the steel industry and steel-using industries, it is contended that there would be no unemployment which would contribute to depressed conditions in other industries because the planned economy would find other jobs for the workers. This it could do, because it would employ workers as long as their products were desired by consumers and not merely so long as it could make profits by using their labor.

But how quickly could other jobs be found for these workers, and what kinds of jobs would they be? If the workers could not be placed in other jobs quickly, the demand for the products of other industries might suffer. Moreover, it might often be necessary to reemploy the workers in jobs in which they would turn out products that, although they would be taken off the market by consumers, could not be produced on the basis of prices and costs, if these prices and costs were determined in a free market. Such submarginal jobs would prevent unemployment, and it would probably be better to have the workers employed in them than to have them unemployed; but the difference between giving the workers employment in submarginal jobs under collectivism and giving them employment in raking leaves, digging holes, and mending streets under the W.P.A. in our capitalistic system is not so very great.

All this, of course, does not mean that a collectivistic economy would have no advantages over a capitalistic economy in the way of economic stability. Some factors which under capitalism are important in connection with business depressions and unemployment (such as the overexpansion of bank credit and the tendency for competitive industries to overshoot the mark with regard to total quantities of productive facilities) would be eliminated or controlled under collectivism. However, the fact remains that, until it is possible for planned productive results to be perfectly realized in practice, there are opportunities for grave maladjustments to occur under collectivism. And in the face of such maladjust-

ments it is entirely possible that a collectivistic economy would operate to conceal business depressions rather than to eliminate them.

The Issue of Freedom. Finally, it is commonly urged that collectivism would be undesirable because it could succeed, if at all, only through regimentation and the subordination of the individual. In the first place, there is a grave question whether economic planning is consistent with political democracy. Full-fledged economic planning seems to require that enormous powers for making and enforcing decisions be centralized in a relatively small group of economic planners near the top of the system. Under capitalism, it seems that government officials and agencies are seldom willing to relinquish powers which have once been granted to them, and persons in high governmental posts are usually loath to give up these positions unless and until compelled to do so by the workings of the electoral process. If human nature would not be profoundly changed under collectivism, there are grounds for believing that the planners might become convinced of their own omniscience as planners, and that they would plan above all to keep themselves in office as planners.

Of course, the collectivists are not disposed to admit that this danger is serious. They seem to feel that human nature would be so thoroughly changed under their system that individuals who had been granted enormous powers as planners would cheerfully surrender these powers at the end of a short period of years, if their services as planners had not been satisfactory to the citizens. However, it seems to us that the psychological atmosphere under economic planning might not be favorable for a prompt change of plans and the admission of errors in planning, if the change and admission were likely to cost the planners their jobs. Since errors would be made and plans would have to be changed from time to time, it seems likely that the planners would try to achieve monopoly powers over their jobs. While admitting that, in theory, economic planning is compatible with democracy, we believe that there is a great danger that it would be associated with dictatorship in actual practice. And this, of course, would be quite enough to ruin the socialistic system from the point of view of those who believe in "government by consent of the governed."

From the economic point of view, the individual would not be free under collectivism to follow his self-interest in his own way. He could not establish an enterprise in a field of his own choosing, and decide how much or how little to produce, nor would he be allowed, as under capitalism, to pile up wealth and dispose of it as he saw fit. Under collectivism the economic interests of society would be superior to those of individuals. It is better by far, say the exponents of individualism, to have liberty and possible poverty than to enjoy a more comfortable, assured income at the cost of one's economic freedom.

The collectivists admit that various economic rights exercised by the

individual under capitalistic institutions would be eliminated under collectivism. However, the collectivists contend that these rights—such as the right to found an enterprise, to own great wealth, or to receive a large income—mean comparatively little to most individuals under capitalism. The individual has these rights under capitalism from a *legal* point of view, but he is often economically unable to take advantage of them. Under collectivism, the individual would retain the rights which are most important to him under capitalism—the right to choose his own occupation out of the many that are available, and the right to spend his money income for any commodities and services which please him.

But we may well ask whether freedom of occupational choice and consumption choice is compatible with economic planning. It is difficult to see how the individuals of any economic system could have complete freedom in both of these respects at the same time, except in that most improbable case in which the commodities and services which the individuals in the system desired to consume were precisely those economic goods which the individuals as producers desired to turn out. In the more usual case, individuals as consumers will greatly desire some commodities or services whose production is most unpleasant, while some occupations which people would gladly follow as producers will result in the creation of commodities or services which the people as consumers do not greatly desire. Of course, a sort of adjustment of these conflicting interests is achieved under capitalism by means of the relative prices of various commodities and services and the relative wages in various occupations, but the resulting ranges of products and of occupations are never those which the people would have freely chosen on a non-price basis.

Under collectivism there is the added problem of relating both of these “freedoms” to economic planning. What the socialists probably mean by freedom of consumption choice is that, though the total range of commodities and services which it is deemed worth while to produce will be determined by economic planning, individual consumers will be given as much freedom as possible to spend their money incomes for any commodities or services within this range. In like manner, the total range of occupations which it is considered necessary or desirable to carry on in the economy will be determined by economic planning, but the individuals as workers will have a free choice among all the occupations within the socially approved range. Intelligent economic planning, then, will keep the total range of commodities and services and the total range of occupations consistent with each other. Outside of these planned ranges, there will be no freedom at all. No individuals will be able to consume yachts or mink coats if these commodities are not included in the planned range of goods to be made available to the people, and the individual who wishes to be an adagio dancer or a magician will similarly be out of luck if such occupations have not been provided for in the economic

plan. Thus it would seem that the individual's occupational and consumption choices, while free within a certain range, would on the whole be considerably limited under collectivism.

CONCLUSION

In attempting to evaluate collectivism as a working economic system, we are faced with imposing lists of advantages and disadvantages, of assets and liabilities. An economic system which worked out exactly in accordance with the *theory* of collectivism might be regarded by many as better than our capitalistic order; but it is far from certain that the champions of theoretical collectivism would rate it so highly if they knew in advance how it would actually function. Though collectivism offers some sort of workable alternative to capitalism, the question of how well or how badly it would operate in the United States, as compared with our existing capitalistic system, simply cannot be answered unless we should sometime decide to try it out. We have already noted the growth of what has been called a "world trend" toward collectivism.³ However, there is no evidence that the people of the United States, as a whole or in substantial numbers, have any desire to give up capitalism for the thoroughgoing socialism of Soviet Russia or even the modified socialism of England.

It seems clear that, in any attempt that might be made to persuade the people of this country to adopt collectivism in place of capitalism, the latter would hold important advantages, among which are a long tradition of individualism and a generally high standard of living. A democratic society may be expected to choose for itself the form of economic organization which it regards as best. If, then, the supporters of our present system will undertake to see to it that capitalism is operated in such a way as to win and hold the respect and backing of the people as a whole—by providing equality of opportunity for all, and a large measure of the "good life" for the rank and file, in addition to exceptional rewards for individuals of unusual ability—capitalism should have no difficulty at all competing with collectivism or any other "ism." It is hard to imagine a greater aid to the continuance of a given type of economic society than the conviction, on the part of its members, that it has more to offer than has any other system of economic organization.⁴

Capitalism in the United States in 1975 will doubtless differ considerably from the capitalism of 1925, but if American capitalism is prepared to remedy, from time to time, economic maladjustments of the kinds we

³ Cf. p. 119 (vol. 2).

⁴ "Our system of private enterprise is now being tested before the world. If we can prove that it is more productive and more stable, more generous and more just than any other economic system, we shall have won the test."—President Harry S. Truman, addressing The Associated Press, April 21, 1947 (*The New York Times*, April 22, 1947).

have been examining in this book—maladjustments which, as we have repeatedly urged, can be corrected within the framework of a capitalistic economy—and thus make such modifications as a democratic people may demand because of economic changes that have taken place, we see no reason to fear for the survival of the American system of free enterprise. We can think of no surer safeguard against collectivism than a capitalism so productive and so fair that it commands the enthusiastic approval of the electorate.

1. Why do collectivists think that the capitalistic type of economic system must be abandoned?
2. List the characteristics of collectivism in general.
3. On what grounds do collectivists condemn the capitalistic system of distribution?
4. What is meant by "the competitive wastes of capitalism"? Explain.
5. Are periodic business depressions inevitable under capitalism? Why or why not?
6. State briefly the nature of the major theories of Karl Marx.
7. Are these theories generally accepted today? Explain.
8. Distinguish briefly between socialism and communism.
9. Why do socialists and communists believe that land and capital should be owned by society?
10. How would land and capital be brought under social control?
11. What is meant by "the collective management of land and capital"?
12. How would the national income be distributed under socialism? Under communism? Explain.
13. Compare saving and capital formation under socialism or communism, with the same processes under capitalism.
14. To what extent would a socialistic economy make use of money and the price system? Why?
15. Why might a collectivist society have less need for a price system than a capitalist society?
16. Why is it claimed that collectivism would eliminate the competitive wastes of our present system?
17. Could collectivism reconcile individual and social interests? Explain.
18. Would business depressions occur under collectivism? Why?
19. Why would collectivists expect to have a full employment of labor under their system?
20. What problems would a collectivist economy encounter in trying to adjust planned productive results to the needs and desires of the citizens? Explain.
21. Why is the question of democracy in government under collectivism a very important one in connection with evaluating the probable results of planned production?
22. Could the actual results of planned production under collectivism be expected to be precisely those which were planned? Explain.

23. What is the leading problem in connection with the proposed distribution of income under collectivism? Explain.
24. How well would you expect the collectivist system of moderate differences in wages combined with a host of other incentives to work out in practice?
25. Would a collectivist economy probably operate to eliminate business depressions or only to conceal them? Why?
26. Would collectivism in economic matters be compatible with democracy in government? Explain.
27. Do collectivists promise more than they can deliver when they say that, in their system, individuals will have freedom of both consumption and occupational choice? Explain.

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Socialism in Soviet Russia

FOR TWENTY YEARS, SOVIET RUSSIA HAS AFFORDED AN INTERESTING AND important example of a nation operating as a planned economy. So long as no country actually attempted to operate on a socialistic basis, discussions of the methods and possible achievements of a planned economy were highly theoretical. But Russia—or the Union of Soviet Socialist Republics, as it is now officially called—has provided a modern example of collectivism. With a land area of over 8,000,000 square miles and a population of 193,000,000 in 1940, Russia has undertaken to substitute a socialistic economy for the capitalistic economy of her past. Hence, the Soviet economy is deserving of careful study.

Early Developments. Russia did not become a planned socialistic economy overnight. Soon after the capitalistic order was overturned by the revolution of 1917, an attempt was made to establish an economic system that would use none of the customary means of economic control. Money and prices were to be discarded. Consumers' desires were to be provided for through a system of rationing, and producers' needs by deliveries against special warrants. Nationalized factories were to furnish supplies of the various kinds of economic goods, while the Supreme Economic Council estimated the kinds and quantities to be produced. Industrial conscription was to be employed, to a considerable extent, to insure that workers performed the proper tasks. Russia had never achieved great success as an industrial nation even prior to World War I, and under this unprecedented and untried type of economic system economic activity fell off to a small fraction of even its pre-war level.

In 1921, a new economic policy was adopted which restored money, prices, and buying and selling activities, and economic planning was attempted on a modest scale. Production revived gradually under this new policy, and by 1927 it had about reached its pre-war level. At this time, the first Five-Year Plan was drawn up, providing for a comprehensive program of economic planning. This Plan was announced as "completed" early in 1932, after a little more than four years of operation. The U.S.S.R. (as the Soviet Republics are commonly called) completed its second Five-Year Plan by 1937, and the third of these Plans was scheduled for completion in 1942, only to be rudely interrupted by the outbreak of the war with Germany in mid-1941. No new Five-Year Plan was attempted while

World War II was in progress, but a fourth, to run from 1946 through 1950, was announced early in 1946. Before describing economic activity as it is carried on in the U.S.S.R., it will be necessary to examine briefly the present government of the country.

THE GOVERNMENT OF THE U.S.S.R.

The Communist Party. Any account of the government of the U.S.S.R. which failed to describe the nature and importance of the Communist party would be incomplete indeed, for the government and the party are one and indivisible. The Communist party, in other words, has outright control of political and economic life in the U.S.S.R. Though the party contains only about 5,000,000 regular and probationary members,¹ or something over 2 per cent of the population, and though non-Communists are allowed to vote and are sometimes elected to political office, most of the important economic and political positions in the country are, in fact, held by party members, and the party formulates all of the important policies which are carried out by the government. It is the only political party permitted to exist in Russia today.

New party members are drawn almost entirely from the various youth organizations of the party, which include about 17 million members according to one estimate.¹ These organizations are the Comsomol, or Young Communists, aged 15 to 26; the Young Pioneers, aged 11 to 15; and the Little Octobrists, aged 8 to 11. The party is highly organized, the organization progressing from factory, farm, village, and city units, through district and regional congresses, to the All-Union Communist Party Congress. The Congress elects a Central Executive Committee of 71 members, and it is largely in the committees of this Central Executive Committee (the Organization Bureau, the Secretariat, the Central Control Commission, and especially the Political Bureau of 10 members) that the control of the party actually lies.² Membership in the party is something of an achievement. A person is placed on probation for a period before being taken into regular membership, and the party has periodic "purges" which are intended to rid it of members who fail to live up to party standards. The party insists upon conformity to standards of personal conduct, as well as enthusiastic participation in party and civic activities, and enforces rigorous discipline within its ranks.

The Governmental Organization. The government of the U.S.S.R. operates on the basis of a constitution which was ratified late in 1936. The legislative powers of the government are exercised by the Supreme

¹ D. J. Dallin, *The Real Soviet Russia*, New Haven, Yale University Press, 1944, p. 214. It is only fair to say that estimates of membership in the Communist party and its youth organizations vary widely from one source to another.

² *Communism in Action*, 79th Congress, 2nd Session, House Document No. 754, Washington, Government Printing Office, 1946, pp. 95, 96.

Council, composed of two houses, the Council of the Union and the Council of Nationalities, each having about 600 members. The Council of the Union is elected by the citizens, on the basis of one deputy, or representative, for every 300,000 citizens. The Council of Nationalities includes twenty-five deputies from each Union Republic, eleven from each Autonomous Republic, five from each Autonomous Province, and one from each National Region. All terms of office are four years in length, and the two legislative houses have equal rights. Laws are passed by a simple majority in each house, and each house elects a Chairman and two Vice-chairmen.

The Supreme Council selects the Presidium, which is really a committee of the legislative body, and has 42 members. The Presidium has certain powers, such as the power to disband the Supreme Council in the event of permanent disagreement between the houses, to call new elections, to call the Supreme Council into session, and to exercise many of the legislative functions of the Supreme Council when that body is not in session. The highest executive or administrative organization of the U.S.S.R. is the Council of Ministers, which is selected by the Supreme Council and is responsible to it. It is composed of a Chairman (Stalin), 8 Vice-chairmen, 45 Ministers and 3 other officials.² The State Planning Commission, which is the chief agency for economic planning, is a Committee of the Council of Ministers. Justice is administered by the Supreme Court of the U.S.S.R., the Supreme Courts of the Republics and Autonomous Regions, and the People's Courts. The several Supreme Courts are selected by the Supreme Councils of the U.S.S.R. and its constituent republics and regions, but the People's Courts are elected by direct vote of the citizens in the various districts. Every Union Republic and Autonomous Republic has a governmental setup almost identical with that of the U.S.S.R.

The government of the U.S.S.R. is federal in form, but power is concentrated largely in the central government. The central government controls all external affairs of the country, including a monopoly of foreign trade, and internally controls the planning of the national economy, approves the budgets of all governmental units, administers banks and all productive or business establishments which are of All-Union importance, administers transportation and communication, controls money and credit and the use of land, provides a single national system of accounting, controls education and public health, and establishes principles of labor legislation and of legislation governing the judicial system and procedure. In recent times, moves have been made in the direction of giving greater powers than formerly to the lower units of government, but it remains to be seen whether real or merely paper changes will be the result.

It is clear that, under the present government, the legislative, executive, and judicial powers of the government are exercised by separate organizations, though the legislature is superior to the other two departments of

government in power and authority. Direct elections are substituted for the indirect elections which prevailed prior to 1936. Even members of the Supreme Council are elected directly, whereas the legislature in former times was several stages removed from the actual voters. Suffrage is universal for persons 18 years of age and over, with the exception of the insane and persons deprived of electoral rights by court sentence. All classes of voters have equal rights of representation in the legislative bodies, and elections are by secret ballot. However, there is still much economic rather than geographical representation, for this principle is fundamental to the Russian system.

Under the present constitution, equal rights are guaranteed to all citizens. All are granted freedom of speech, freedom of press, freedom of assembly and of holding mass meetings, freedom of street processions and demonstrations, and freedom of religious worship. Citizens are guaranteed inviolability with respect to their persons, homes, and correspondence. Going beyond the constitutional provisions of other countries, the Russian constitution guarantees the citizens employment and payment for their work in accordance with its quantity and quality, the right to rest and leisure, the right to maintenance in old age, sickness, and accidents, and the right to education. Women have equal rights with men in all spheres of life.

The Dictatorship. In theory, then, the present Russian constitution and government appear most enlightened and democratic. In practice, the people of Soviet Russia live under a dictatorship, as they did before the present government was established. In theory any person, whether a member of the Communist party or not, may run for office. In practice, all candidates save one in each electoral district usually resign before an election is held, and the one remaining candidate is the fortunate individual who is approved by the Communist party. In the first election under the present constitution, more than 100,000,000 voters, or almost 97 per cent of those eligible, went to the polls, and all but 632,000 voted for the single candidates available in their districts. However, the Supreme Council elected in this manner contained 273 non-Communists. In the election of February, 1946, about 110,000,000 voters went to the polls and again showed startling unanimity in voting for the official candidates. The legislature usually votes unanimously for any party-sponsored projects which are placed before it.

Political crimes are regarded as the most heinous offenses that can be committed in Soviet Russia, and the dreaded secret police work day and night to ferret out persons suspected of political crimes and subversive activities. Prior to 1941, when he chose himself as Minister of Defense and Chairman of the Council of Ministers, the Russian dictator, Stalin, did not bother to hold any important official position in the government, but as General Secretary he ruled the Communist party which in turn

controlled the government. In short, as someone has said, the people of Russia "have absolute power provided they do as they are told by the leader through the instrumentality of the party."

THE PLANNING AND CONTROL OF INDUSTRY

In considering the operation of Russia's economic life, we must bear in mind that Russia is under a socialistic system. That is to say, land and capital are socialized and are owned by society, the former entirely and the latter largely. Therefore, it falls to the lot of society, working through the established agencies of government, to plan and direct the use of these basic means of production. In noting how these plans are made and carried out, we shall consider agriculture separately, for the arrangements in agriculture are quite different from those in manufacture.

Industrial Organization. Though there are some differences as between industries in the field of manufacture, the general outlines of industrial organization are quite clear. The individual enterprises or factories, operated by governmental units or cooperative organizations, are formed into trusts or combinations, sometimes one trust to an industry but usually several. The trusts exercise a considerable measure of control over the factories, and for some purposes the trust, rather than the factory, is the industrial unit. For example, the trust controls raw material supplies for its factories and markets their output. The price paid for such output is determined for the trust as a whole, rather than for individual factories. The trust also appoints managers for the individual plants, approves wage contracts, and requires the plants to use the most efficient methods available, interchange technological experiences, standardize their products, keep accounts and stocks of goods properly, and make full use of their resources.

Over the individual plants and trusts in an industry, a higher organization called an administration is found in some cases. This agency supervises the work of the subsidiary organizations and sees to it that the industry as a whole carries out its part in the general economic plan. Subject to the main economic plan, each administration supervises and controls the construction of new productive facilities, the use of the profits made by the trusts, and the accounting methods used by the lower organizations, besides appointing boards of directors for the trusts, engaging in research work, training personnel, and levying fines and penalties on the lower organizations. In such cases, several industries and their administrations are grouped under a Ministry, or department of government and economic activity, headed by a member of the Council of Ministers which we mentioned previously as the highest administrative agency of the government. In other cases, the individual plants and trusts in an industry are responsible to departments, and these agencies in turn to a Ministry

which, in these cases, has charge of just one industry instead of a group of industries.

The Method of Planning. The general objectives to be undertaken by the economic system are planned by the heads of the Communist party for several years at a time. Within the general outline of such objectives, Five-Year Plans (and subsidiary annual plans within the Five-Year Plans) must be drawn up in detail for the economy as a whole, and for each organization or unit within the system. When a new Five-Year Plan is to be constructed, the State Planning Commission, a subsidiary of the Council of Ministers, draws up a first draft on the basis of a mass of statistical evidence gathered for the Commission by several other agencies. The Plan is then broken up into parts, which are handed over to various subsidiary planning agencies connected with such functional units as Ministries, administrations, trusts, and factories, on the one hand, and such geographical units as republics, provinces, regions, and communities, on the other.

The parts of the Plan are examined at each of these various functional and geographical levels, and criticisms, suggestions, and counter-proposals are offered, ostensibly for the guidance of the State Planning Commission. The parts of the Plan, together with the proposed changes, are reassembled in the hands of the Commission, which makes the final draft of the Five-Year Plan. After the final draft is approved by the officials of the Communist party and the Supreme Council, it is again divided up, and appropriate sections are sent back to the various functional and geographical units, so that each may know exactly what is expected of it for that period.

Since the State Planning Commission is composed of a President, a Board of eleven members, and a Council of about seventy persons selected from among the noted scientists, engineers, economists, and cultural leaders of the economy, and since it has a staff of several thousand technicians, statisticians, and clerks, it is probable that the Commission itself does virtually all the planning under the Russian system. The complicated procedure used in formulating the Plans probably exists for the purpose of creating enthusiasm for planning, giving many citizens a feeling that they are participating in the management and direction of the economy, and occasionally getting various factories or trusts to undertake greater productive feats than the Commission would have required of them. The Plans themselves are very bulky documents. The first Five-Year Plan totaled some 1600 finely printed pages, and the second totaled 1300 pages.

Under the Russian planned economy, the activities of every industrial unit are obviously quite closely circumscribed. A plant is given a specified output to achieve, or to exceed if possible; it is told the amount and kinds of labor it may have and the wages to pay, the amount of working capital which it is granted or may borrow, what is to be done with this capital,

the amounts of materials and supplies it may have and at what prices, and the agency to which it is to sell its output and at what price. It is clear that the Plans are both physical and financial in character. From the physical point of view, they are a matter of so many units of output, so many workers of various kinds, and so much land and capital. From the financial point of view, both selling prices and costs of production are predetermined for the several industrial units.

It is something of a problem to set prices at which goods are to be sold to the governmental agencies which then proceed to distribute them to consumers. If the government should set any one price for all concerns making certain products, some concerns could make profits without striving greatly for efficiency, while others would be unable to cover costs no matter how hard they tried. On the other hand, to specify different prices for identical goods produced in different factories would lead to many complications. The problem has been solved by having every trust take over the output of its individual factories and sell it at one price established by a price-fixing commission. This price is supposed to be sufficient to cover the planned costs of the subsidiary factories as a whole and the costs of running the trust, and to provide also for the payment of the "turnover" tax from which the government derives a large part of its revenue. The trust then computes what part of the price must be turned over to the individual factories to cover the money costs which they must meet, and the remainder is retained by the trust itself.

The Relation of Prices and Costs. We see, therefore, that money is used in the U.S.S.R., and prices and costs are expressed in terms of money, but the relationship between prices and costs in a capitalistic order like the United States of America is very different from their relationship in Russia. The prices that Russian productive establishments are allowed to charge are usually supposed to cover costs and yield a profit, given normal efficiency on the part of the productive units; but these prices are not necessarily the same as those charged to consumers. In some cases, the prices charged consumers are less than those received by the industries, so that the government is, in effect, subsidizing these particular industries. In other cases the reverse is true, and the government reaps a profit on its sale of certain goods to consumers. Of course, when profits are made under the Russian system, they do not go to private individuals as in this country.

Another important point is that the relationship between costs and prices does not control production in the U.S.S.R. In our system, if the price at which a good can be sold to consumers is for a long time too low to cover costs of production, the quantity produced will be restricted; and the receipt of prices which are more than enough to cover costs of production will have the opposite effect. In Russia, however, production is controlled by the government and it may be

decided to increase production in a non-profitable industry or to decrease it in a profitable industry, if such measures appear to be desirable from the point of view of public welfare. Prices and costs are used merely as accounting devices in Russia. They furnish a convenient medium for expressing the content of plans for different industries, and for comparing the results achieved. Since each productive establishment has its costs and prices determined for it, it makes or does not make unplanned profits according to the efficiency with which it operates. A lack of profit in a particular year may mean little or nothing with regard to efficiency, but long-continued losses by a productive establishment are at least *prima-facie* evidence of faulty operation. Such losses might lead to a reorganization of an establishment or to a change in management, but the fact of a profit or loss plays little part in influencing decisions of the government as to what goods shall be made or the quantities in which they shall be made.

The Problem of Planned Production. In our own system, consumers express the relative strength of their desires for different economic goods through their willingness to pay high or low money prices, and producers presumably are guided by these prices into producing the goods most desired by consumers. But in Russia the government, through the State Planning Commission, decides what shall be produced and in what quantities; and the important question is how well production can be adjusted to meet the desires of the people as consumers under this system. In part, this coordination depends upon the temper of the planning authorities. If they decide to devote the productive resources of the country to building up a huge war machine or to supplying the country with large amounts of capital goods immediately, consumers' wants may go largely unsatisfied for a time. However, if the authorities undertake to adapt production to consumers' desires, a very considerable degree of success may be achieved. Up to the present time, it has been relatively easy to dispose of the things which were produced, because the Russian people were so desperately in need of all kinds of goods when planned production was started. Later on, when basic wants are more nearly satisfied, the problem of adjusting production to human desires may become a more serious one. However, it should be emphasized that, if maladjusted production should come about, it would not lead to a breakdown of the system. For the government controls prices and can always get rid of goods by lowering prices sufficiently or discourage their purchase by raising prices; and eventually, of course, it may be possible to adjust production so that it will be closely related to consumers' desires.

The planning authorities can obtain some measure of the success of their production policies in satisfying human desires by observing the alacrity or reluctance with which consumers take economic goods off the market. In the past, however, such information was not completely reliable, for the

Russian government rationed certain commodities among the consumers at artificially low prices. Under these conditions, neither the demand for rationed commodities nor that for non-rationed commodities gave an accurate picture of consumers' desires. Since people were allowed to buy only certain quantities of the rationed commodities, it was impossible to decide how much more of their incomes they would have spent on these goods had they been permitted to do so. On the other hand, their purchases of non-rationed goods may have been much greater, *because some commodities were rationed*, than they would have been if the people had been free to spend their incomes as they desired. After the rationing of consumers' goods in the U.S.S.R. had been discontinued, the reactions of consumers to planned production at planned prices became a safer guide for the planning authorities than formerly.

Some hope for success in the adjustment of planned production to human desires arises from the fact that the planning authorities in Russia are able to avoid some of the pitfalls of capitalistic systems. Without any great effort, the authorities decide that luxurious yachts and limousines shall not be built so long as the people have unsatisfied wants for food and clothing. It is similarly easy to decide that worthless patent medicines and other harmful goods shall not be made while the people lack adequate housing. It is possible to standardize the products turned out, instead of permitting the production of many competing varieties, and, of course, productive resources are not wasted in creating competitive advertising designed to lure customers from one brand of a product to another or even from one product to another. Finally, having decided the volume of output to be achieved in each industry, the planning authorities can see to it that the productive facilities of the industry are only sufficient to insure this output. The output decided upon may or may not be the proper quantity from the point of view of consumers, but in any case it is possible to provide for the amount planned without the wasteful duplication of productive facilities that is characteristic of competitive economic systems.

AGRICULTURE IN THE U.S.S.R.

Agriculture in the U.S.S.R. is planned in much the same way as manufacturing, but the government does not operate agricultural establishments to the same extent as industrial establishments. The government owns farm land as it owns other kinds of land, but it actually directs only a relatively small part of agricultural production. For the most part, reliance is still placed in individual initiative and the incentive of pecuniary rewards to induce the farmers to produce in abundance.

The State Farms. Soviet Russian agriculture is organized in three forms. First there are 3961 state farms, with an average sown area of 6651 acres.³

³ *Ibid.*, p. 73.

These are operated directly by the government through agricultural trusts, and their organization is sufficiently similar to that of the manufacturing industries to make a detailed description unnecessary. The total output of these farms must be turned over to the appropriate governmental agency at specified prices, and the farm workers are paid wages. When the state farms were first set up, the emphasis was on great size. The minimum size was about 5000 acres, and some farms, in grain production, "embraced hundreds of thousands of acres, with huge fleets of combines, batteries of searchlights for night work, radios sending orders to the harvesters encamped for weeks in the distant fields, and airplanes bringing their medicines, magazines, and entertainers."⁴

Since the state farms, under the first Five-Year Plan (1928-32), increased rapidly in number and in the proportion of the total cultivated area which they controlled, it was widely assumed that a gradual shift of agricultural activity from other types of farms to state farms was desired by the government. However, the large state farms were inefficient, as was indicated by poor crops, a heavy mortality rate for livestock, frequent changes in officials, and high labor turnover. As a result, some state farms have been broken up into smaller collective units, and the percentage of the total cultivated area controlled by the state farms declined from 12.1 in 1936 to 8.9 shortly before World War II.⁵ This may mean that Russia intends to depend permanently on collective or cooperative farms for most of her agricultural production.

The Collective Farms. Collective farms are the most important type of farm organization in the U.S.S.R. They vary in size from a dozen to more than a thousand peasant households each. The average collective farm contains about 75 peasant families and 1198 acres of land.⁶ Under the usual form of organization, the peasant retains his dwelling, livestock for purely domestic use, household goods, and a little land for a garden; but the rest of the land, buildings, machines, tools, and livestock are used collectively. These collective units do not, as a rule, own many large agricultural implements, such as tractors or combines, but receive the services of such equipment from machine-tractor stations, of which there were some 6350 scattered over the country at the beginning of World War II.⁶

The collective farmers work in common, performing planned and assigned tasks under group leaders. Their incomes depend upon a number of factors. The volume of produce raised varies significantly from one year to another. In many cases, a portion of the crop must be set aside as food or fodder. A given amount of produce per unit of land must be sold to the government at a low fixed price, and other amounts must go

⁴ A. R. Williams, *The Soviets*, New York, Harcourt, Brace and Company, Inc., 1937, p. 173.

⁵ M. T. Florinsky, *Toward an Understanding of the U.S.S.R.*, New York, The Macmillan Company, 1939, p. 199.

⁶ *Communism in Action*, p. 73.

to pay interest or principal on loans which the farm has received from the government, and rent for the use of farm machinery furnished by the machine-tractor stations. The rest of the crop may be sold to an appropriate governmental agency, or on the relatively free markets for farm produce which exist in the cities; the money received, after deductions for administrative expenses or farm improvements, is divided among the collective farmers. Or the net crop may be divided among the collective farmers, to be used by them or sold for money along with whatever produce they may have raised on their own little plots of land. The work of the farmers is divided into seven categories, with the lowest getting one-half labor day's credit, and the highest two labor days' credit, for each day's work. Each collective farmer gets a share of his farm's cash income, or net produce, on the basis of the number of days worked and the category into which his type of labor falls.

Since the government does not operate the collective farms, it is necessary to employ devices to insure that the collective farmers will raise the desired types of products in appropriate quantities, for otherwise the plan for the whole economy might be seriously disrupted. Such devices lie ready to hand in the Russian system. Collective farmers are induced to raise the planned crops by being granted low taxes, low interest rates or outright grants of funds, low charges for machine-tractor service, and high prices for the portion of crops that is available for sale. Collective farmers who raise the "wrong" crops may be penalized by high taxes; high interest rates, repayable loans, or even denials of credit; high charges for machine-tractor service, or even an artificial "shortage" of such service; and low prices for the remainders of their crops. Thus, the operations of the collective farmers are controlled by working on the economic motivation of the farmers.

The number and importance of the collective farms have been increasing by leaps and bounds. Under the first Five-Year Plan, their number increased from 33,300 to 211,100, and their cultivated area from 2,517,000 hectares to 94,038,000 hectares, or from 2.2 per cent of the total cultivated area of the country to 70 per cent. In 1945, there were said to be 242,400 collective farms, which included over 90 per cent of the total cultivated area.⁷

Peasant Farms. Finally, some agricultural land is still cultivated by individual peasants. They do not, of course, own the land, but they support themselves by working it and selling their surplus products. Like the collective farmers, they must sell a certain percentage of their output to the government at low fixed prices (as a tax), and in general they are treated somewhat more harshly in this respect than the collective farmers, in order to discourage the individual type of farming. In 1928, individual peasants operated almost all of the cultivated area of Russia, but there are now only a million or so individual peasant holdings, averaging about

⁷ *Ibid.*, p. 73.

two acres in size and including altogether less than one per cent of the total cultivated area.⁷

THE DISTRIBUTION OF INCOME

Land and Capital. Since land in the U.S.S.R. is owned by society as a whole, private individuals do not receive rent. Land is apportioned among industries in accordance with the plans for economic activity. The industries are not charged rent for the use of the land, though certain taxes (such as those imposed upon farmers by requiring them to sell a part of their crops to the government at specified low prices) might be construed as rents. Again, the funds which are available for capital investment are apportioned among the industries by several government banks. Here, too, there is no consideration of the possible earnings of capital in different uses, or of the rates of interest which industries might be willing to pay. The assignment of capital funds (and the interest, if any, that is charged) depends wholly upon plans which have been made in the light of the need for expanding productive facilities in the several industries.

With respect to the volume of new capital, as distinguished from the rationing of existing capital, the situation is a little more complex. In a physical sense, the process of saving and capital formation is carried on collectively. That is, the Planning Commission decides that, in the next five years, say 50 per cent of the national income should take the form of new capital goods instead of new consumers' goods and services. It plans accordingly, and sees to it that the plans are carried out. The cost of saving and capital formation is the same in Russia as elsewhere. That is, the cost of augmenting the supply of producers' goods, or capital, which will make for a more abundant life in the future, is the necessity of accepting for the present a smaller real income in the form of consumers' goods; for, in directing resources into the construction of capital goods, the productive factors available for turning out consumers' goods are diminished for the time being. In capitalistic countries, the relative amounts of capital formation and present consumption are determined by individuals, influenced by interest rates and the prices of consumers' goods, while in Russia the decision is made by the Planning Commission without any necessary regard for the desires of consumers. If the government goes in so extensively for capital construction that immediate income in the form of consumers' goods is unduly diminished, the people have to adjust themselves to the situation.

In regulating saving and capital formation, the Planning Commission may adopt either of two plans. The first is to see to it that, in a given year, the people receive money incomes just large enough to take the available consumers' goods and services off the market. The second plan is to give the people of the country a total money income roughly equal

to the value of the entire national real income, and then recapture sufficient of the money income so that what remains just buys the available consumers' goods and services. Strangely enough, the second method is used in Russia.

The measures used to recapture a part of the money incomes are various. Attempts are made to induce the citizens to save, and to invest their savings in government bonds or savings accounts. The products of some industries are sold at prices somewhat higher than planned costs, so that planned profits are made. A turnover tax, similar to a sales tax, is collected on many products. The rate of this tax is as high as 90 per cent on individual products, and in some periods has amounted altogether to some 60 per cent of the total receipts from retail trade.⁸ Other taxes are levied as well, and individuals are required to contribute to funds for social security and other purposes. In the end, the consumers are presumably left with enough money income to buy the available consumers' goods and services, but no more.

The Apportionment of Labor. Since rent and profits do not accrue to individuals in Russia, and since the amount of interest received by private individuals is negligible, it follows that the national income available for consumption is distributed in the form of wages. The apportionment of labor among industries and occupations, and the determination of the wages to be paid for different types of labor, have given some trouble to those in authority. Since land and capital are not human agents of production, and have no feelings or home ties, they may safely be assigned in arbitrary fashion to various industries and parts of the country in accordance with the plan. But the case of labor is different. It would be inhumane, and probably uneconomical as well, to assign labor in a purely arbitrary fashion. On the other hand, the workers cannot be depended upon to move spontaneously to the positions in which they are most needed and can be of greatest service to society.

In this dilemma, the government has had recourse, for the most part, to the capitalistic method of rationing the labor supply. High wages or superior rations at government stores have been used to attract workers to industries and posts where more labor is needed, and low wages or inferior rations to get them away from occupations where less labor is required. Because of preferences, habits, and prejudices on the part of the workers, these inducements do not work perfectly in apportioning the labor supply in Russia; but neither do they work perfectly in capitalistic countries. Prior to 1939, the freedom of movement of Russian workers was so extensive that it resulted in high labor turnover and much absenteeism.

Differential Wages. Even the best economic plan is of little use unless it is efficiently carried out. To encourage efficiency, it has been found neces-

⁸M. T. Florinsky, *Toward an Understanding of the U.S.S.R.*, p. 164.

sary in Russia to reward good work with relatively high wages. Wage differentials have been used, also, in the hope of getting people to accept difficult and responsible positions requiring considerable ability and training. But the distribution of national income according to the productivity of labor is quite a different thing from equal distribution, or distribution on the basis of needs. Moreover, wage differentials based upon productiveness are especially embarrassing to the Communists of Russia, who have held that common labor is as honorable an occupation as any, and is entitled to as high a wage. However, embarrassing or not, it has been necessary to make this concession to capitalistic methods.

But it may be said that wage differences in Russia are small as compared with differences in money income in capitalistic societies. By the end of the first Five-Year Plan, the ratio between the highest and lowest money wages was commonly reported to be about 10 to 1. This ratio was reported to be about 12 to 1 in 1937.⁹ A decree of November, 1937, established a minimum wage of 110 rubles per month for workers in industry and transportation, and a further decree of August, 1938, prohibited salaries above 2000 rubles per month.¹⁰ On this basis, the extent of inequality in incomes for workers of all grades in industry and transportation was about 18 to 1. Inequality over the whole economy was somewhat greater than this, for some workers in other fields undoubtedly received wages which were below the minimum established for workers in industry and transportation. Finally, a more recent estimate has it that the extent of inequality in income distribution in the U.S.S.R., as measured by the highest and lowest wages, is about 20 to 1.¹¹ The differentials in wages in Russia apparently are thus gradually approaching those which exist in capitalistic countries, though the extent of inequality in total income distribution in capitalistic countries is much greater, since individuals there are also allowed to receive rent, interest, and profits as private income.

Critics of the Russian economy sometimes allege that these admitted differences in wages and incomes do not tell the whole story, and that high party and industrial officials draw salaries which are far above the legal maximum. Sometimes, the critics say, these fortunate individuals receive as much as 7000 rubles a month. On the basis of the minimum wage for workers in industry and transportation, this would produce an inequality of about 64 to 1 between the highest and lowest incomes. In any case, money wages do not tell the whole story, for all Russian workers receive some real income directly from the government without charge. If such free services were distributed more unequally than the money wages,

⁹ *The Nation*, November 13, 1937, pp. 523-526.

¹⁰ M. T. Florinsky, *Toward an Understanding of the U.S.S.R.*, p. 168.

¹¹ A. Yugow, *Russia's Economic Front for War and Peace*, New York, Harper & Brothers, 1942, p. 165.

they would make for increasing inequalities in real income, but the chances are that these services do not vary greatly in amount as between individuals. If this is the case, their distribution tends to reduce inequality in terms of real income.

In the past there was another reason why differences in money wages in Russia did not mean corresponding differences in real wages. Under the old system of distributing consumers' goods, a man with a money income ten times as great as that of another might have had a real income only (say) twice as great. For both men were probably allowed to purchase the same quantities of rationed goods *at low prices*, but the one with the larger money income had to spend the balance of it in the open market at prices many times as high as those of rationed commodities. Hence, his advantage in terms of real income was relatively small. Indeed, workers receiving low money wages were sometimes definitely favored in the matter of rationing.

The differences in real wages in Russia have in general been so small in the past that many people questioned that they would result in efficiency or even the voluntary acceptance of the more difficult and responsible positions. This problem of providing incentives under the relatively equal income distribution of a planned economy was discussed in the preceding chapter, and need not be enlarged upon here. At any rate, Russia does not depend entirely upon financial or economic incentives in her control of the labor supply. If worst comes to worst, the government has the power to draft or conscript labor to serve in any and all industries, and severe punishments may be imposed for inefficiency. The members of the Communist party and the Russian Army are also available as an emergency labor force which may be arbitrarily assigned to any type of work anywhere, and the Young Communists are subject to virtually the same regulation. When workers have been placed to the satisfaction of the authorities, there have been devices available to keep them there. These devices have included keeping the workers in arrears in their pay, and issuing ration cards through the factory so that a worker has had to surrender his ration card if he has given up his job.

THE MARKETING OF CONSUMERS' GOODS

For several years, the process of getting economic goods into the hands of final consumers was very complicated in Soviet Russia. At the beginning of the first Five-Year Plan, some stores were operated directly by the government, others were run by cooperative associations, and still others by private individuals. The private traders were virtually eliminated by 1933, and the business was about equally divided between cooperative and government stores. Since that time, the government stores have become more and more important, and have taken over all of the business

in the cities. In 1937 the government stores controlled approximately two-thirds of the retail trade.

Rationed and Unrationed Commodities. In the early years of economic planning, there were several types of "closed" stores in the Russian merchandising system. In one type, only the workers in particular enterprises could buy at low prices, on the basis of ration cards. This arrangement provided a means of favoring important groups of workers. In a second type of closed store, all citizens possessing ration cards could purchase definite physical quantities of specified goods. Their prices were higher than those of the stores operated for the benefit of the workers of particular enterprises, but lower than those in the "open" stores in which anyone could buy as much of any available commodity as his purchasing power would permit. Finally, there were special stores (Torgsin and Isnab) at which foreigners traveling or employed in Russia could make purchases.

The use of ration cards did not always indicate extreme scarcity of the rationed goods. It merely meant that these goods were being sold in the closed stores at prices which were very low in view of their limited quantities. The goods could have been distributed just as effectively without rationing, by allowing their prices to rise to any level to which the competitive bids of buyers might force them. But these high prices would have resulted in persons with relatively large money incomes getting all the goods, while less fortunate persons were excluded from the market altogether. By rationing at low prices it was insured that most persons, regardless of the size of their incomes, would be able to buy small amounts of these commodities. The rationing method constituted a severe restriction on consumers' freedom of choice, for ration cards were honored only in terms of the rationed commodities, while the possession of money income, without rationing, would permit the individual to buy whatever he chose. However, this restriction of choice was probably not a serious matter, so long as rationing was confined to the necessities of life.

Changes in Marketing. The rationing of bread and flour ended in 1934, and that of other commodities in 1935. Thereafter, anyone could buy as much goods as he wished in any shop, within the limits of his purchasing power. The retail prices of goods were not uniform throughout the country, but they were the same in all stores within each of several zones or districts. Rationing came to an end as the result of increased production of consumers' goods, the diminution of the need to favor special groups or classes of persons, the superior effectiveness of wage differentials (as compared with differential rations) in distributing the labor supply among industries and places, and the desire to improve the methods of retailing, which did not need to be very well managed so long as people purchased on the basis of rations. The changes, of course, were for the better, though the merchandising system was still under close governmental control. The government ownership and operation of the basic

means of production, combined with considerable freedom of choice on the part of the citizens as to what they will consume, come close to the ideal of a socialistic society.

The Resumption of Rationing. The new unrationed system of retailing was continued only until July, 1941, soon after the beginning of the war with Germany. At that time it became necessary to reintroduce rationing in the case of bread, butter, meat, sugar, shoes, clothing, tobacco, and a number of other goods. Some of the wartime rations, such as those of meat, fish, and macaroni, were considerably more generous than those which prevailed in the earlier rationing period; but others, such as those of sugar and bread, were almost identical with the rations of the earlier period. As in the earlier rationing period, the citizens were divided into several classes for rationing purposes, and considerable differences in rations existed as between these groups. Closed or ration stores, and open or commercial stores, again made their appearance. Prices in the ration stores were well stabilized on the whole, but those in commercial stores went up to almost astronomical heights. Rationing had not yet been abandoned entirely by the end of 1947.

INTERNATIONAL TRADE AND MONEY

The Trade Monopoly. While Russia has many and varied productive resources and is, at least potentially, more nearly self-sufficient than most economies, she has had at times to depend upon foreign countries for supplies of several kinds. Moreover, she has tried to make sure that importing and exporting will be carried on only when her interests require them, for the international trade of the country is carried on as a governmental monopoly. The government has also monopolized international financial operations, conducting them in the past in terms of an artificial monetary unit which was not used domestically. When a quantity of a foreign product is essential to the operation of the plan, the trading monopoly is in a strong position, for it can sell Russian products abroad at almost any prices in order to obtain purchasing power in other countries. It could, for example, sell wheat abroad at a price only half as high as that which the government paid the farmers, and the government would make up the loss incurred in this way by selling other articles in the domestic market at a profit.

However, the trading monopoly has to be careful about dumping goods abroad, lest other countries refuse on this account to trade with Russia; and, of course, it cannot command higher prices in the world market than the exporters of other countries are getting. Any sharp fall in the world price of a good which Russia is exporting means that a larger quantity than usual of the good must be sent from Russia to get a given amount of purchasing power abroad. This means, in turn, taking more goods than

usual away from the Russian consumers. It is quite clear, then, that in Russia the costs of importation lie in the amounts of exports which must be given up in exchange and hence subtracted from domestic consumption.

Control of the Money Supply. The issuance of money in Russia, while theoretically limited by requirements for the maintenance of gold or other reserves, is in reality entirely under the control of the government. Moreover, since the government has maintained a monopoly in international trading and in international financial operations, using an artificial monetary unit, the management of the domestic monetary supply has been freed from the influence of such things as international gold movements, interest rates at home and abroad, the international balance of payments, and fluctuations in foreign exchange rates, which are of importance to capitalistic countries under normal conditions. Nothing that happens in the international field can force Russia into inflation or deflation at home, or cause her to expand or contract her currency and credit.

It appears, then, that the monetary problem is primarily one of adjusting the supply of money to domestic needs. That is, the government must be sure that the citizens receive enough purchasing power to enable them to remove from the market the available quantities of goods at the prices at which these goods are offered. However, the overissue of currency would matter relatively little. Since the government controls prices rigidly, the issuance of excessive amounts of currency could not raise prices, but instead would only increase the unspent surpluses in the pockets of consumers. The use of money involves the use of money prices and, as we have seen, the Russian economy is quite experienced in pricing goods in terms of money. However, it will be recalled that price movements are not so influential in Russia as elsewhere. In distributing consumers' goods among the citizens and in apportioning the supply of labor among industries and occupations, price movements operate to some extent in Russia as in other countries. But they have little, if any, influence on the distribution of land and capital among industries, on the total volume of saving and investment, and on the determination of the kinds and quantities of economic goods to be produced.

ACCOMPLISHMENTS OF RUSSIAN ECONOMIC PLANNING PRIOR TO 1941

General Results. The Soviet planned economy, at the beginning of Russia's war with Germany, was still too young to permit observers to reach any complete or final appraisal of its accomplishments and failures, but certain tentative observations may be made on the basis of the only available type of information—the official statistics published by the Soviet government itself. The fact that Russia was able to keep a planned economy functioning might almost be listed as an accomplishment, since

many people doubted the possibility of such an achievement before the Russian experiment actually began. However, official statistics indicate not only continued operation but rapid progress in many respects. For example, the Russian national income, which had amounted to some 21 billion rubles in 1913, and to 25 billion in 1928, increased to over 45 billion in 1932 (after the first Five-Year Plan), to 96 billion in 1937 (after the second Five-Year Plan), and to 125.5 billion in 1940. The third Five-Year Plan called for a further increase to approximately 173 billion rubles by 1942.¹²

Another accomplishment is found in the extremely rapid industrialization of Russia under the planned economy. The capital investment in industry amounted to 521½ billion rubles under the first Five-Year Plan, and to 115 billion under the second Five-Year Plan. It was expected to reach 180 billion rubles under the third Five-Year Plan, and had reached 108 billion by the end of 1940.¹³ The number of workers in large-scale industry increased from 3,100,000 in 1913 (and 1928) to 6.4 millions in 1932, and 7.7 millions in 1936. It was expected to reach 9.3 millions by 1942.¹⁴ The total number of workers in state enterprises was 27 millions in 1937 and 30.4 millions in 1940, which may be compared with the total of 11.4 million wage earners in 1913.¹⁵ Russian industrial production was 3.8 per cent of world industrial production in 1929, but 11.0 per cent in 1932, and 15.2 per cent in 1936. It was expected to reach 32.0 per cent in 1942.¹⁶ The average wage per industrial worker was 870 rubles a year in 1928, 1478 rubles in 1942, 3447 rubles in 1937, and 4069 rubles in 1940. The planned average wage for 1942 was 4722 rubles.¹⁷

Rapid progress was also made in the socialization or collectivization of the Russian economy. In 1928, almost all of the agricultural resources of the country were still in private hands, but by 1937, 98.6 per cent of all agricultural production was carried on by state or collective farms. By 1937, 98.7 per cent of all the non-human means of production in the system had been brought into socialized ownership, 99.8 per cent of

¹² H. Johnson, *The Soviet Power*, New York, International Publishers, 1940, p. 194, and N. Vosnesensky, *Economic Results of the U.S.S.R. in 1940 and the Plan of National Economic Development for 1941*, Moscow, Foreign Language Publishing House, 1941, p. 10.

¹³ M. T. Florinsky, *Toward an Understanding of the U.S.S.R.*, p. 164; and N. Vosnesensky, *Economic Results of the U.S.S.R. in 1940 and the Plan of National Economic Development for 1941*, p. 9.

¹⁴ *Results of the Second Five-Year Plan and the Project of the Third Five-Year Plan*, p. 5; and H. Johnson, *The Soviet Power*, pp. 347-349.

¹⁵ N. Vosnesensky, *Economic Results of the U.S.S.R. in 1940 and the Plan of National Economic Development for 1941*, p. 32.

¹⁶ H. Johnson, *The Soviet Power*, pp. 92, 93.

¹⁷ *Handbook of the Soviet Union*, New York, The American-Russian Chamber of Commerce, 1936, pp. 69, 70; H. Johnson, *The Soviet Power*, pp. 69, 347-349; and N. Vosnesensky, *Economic Results of the U.S.S.R. in 1940 and the Plan of National Economic Development for 1941*, pp. 10, 32.

TABLE 56. PRODUCTION OF IMPORTANT INDUSTRIAL AND AGRICULTURAL COMMODITIES IN SOVIET RUSSIA IN SELECTED YEARS IN COMPARISON WITH PLANNED ESTIMATES

(Source: *Results of the Second Five-Year Plan and the Project of the Third Five-Year Plan*, pp. 5, 13; and several minor sources)

Item	Units	1913	1928	1932 (actual)	1932 (planned)	1937 (actual)	1937 (planned)	1940 (actual)	1942 (planned)
1. Locomotives.....	Numbers	418	478	828	1600	1581	2800	1600 ^a	2340
2. Goods trucks.....	Thousands	14.8	10.6	20.2	12.6	66.1	118.4	51.0	120.0
3. Motor cars.....	Thousands	0.1	0.7	23.9	105.0	200.0	200.0	194.9 ^a	400.0
4. Tractors.....	Thousands	.....	1.2	50.6	55.0	80.3	88.5	.....	.....
5. Electric power.....	Billions of K. W.	1.9	5.0	13.5	22.0	36.4	38.0	48.2	75.0
6. Oil.....	Million tons	9.2	11.7	22.3	21.7	30.5	46.8	34.2	54.0
7. Coal.....	Million tons	29.1	35.5	64.7	75.0	127.9	152.5	164.7	243.0
8. Pig iron.....	Million tons	4.2	3.3	6.2	10.0	14.5	16.0	14.9	22.0
9. Steel.....	Million tons	4.2	4.3	5.9	10.4	17.7	17.0	18.4	27.5
10. Rolled steel.....	Million tons	3.6	3.4	4.3	8.0	13.0	13.0	13.0	21.0
11. Sulphuric acid.....	Million tons	157	211	552	1450	1666	2080	.....	.....
12. Cement.....	Million tons	1.5	1.8	3.5	6.4	5.5	7.5	5.3	11.0
13. Sawn lumber and timber.....	Million cubic meters	11.9	13.6	24.4	42.5	33.8	43.0	.....	45.0
14. Paper.....	Thousand tons	205	284	479	900	832	1000	.....	1500
15. Cotton textiles.....	Million meters	2227	2742	2417	4700	3447	5100	3800	4900
16. Woolen textiles.....	Million meters	95	93.2	88.7	270.0	108.3	220.0	123.0 ^a	177.0
17. Leather shoes.....	Million pairs	8.3	29.6	84.7	84.0	164.2	180.0	148.3 ^a	258.0
18. Raw sugar.....	Thousand tons	1290	1283	1403	1400	2421	2500	162.2	3500
19. Grains.....	Million metric quintals	816	733.2	698.7	1057.8	1202.9	1048.0	1190.0	1300.0
20. Cotton.....	Million metric quintals	7.4	8.2	12.7	19.1	25.8	21.2	25.2	32.9
21. Flax.....	Million metric quintals	3.3	3.2	5.0	6.2	5.7	8.0	6.7	8.5
22. Sugar beets.....	Million metric quintals	109.0	101.4	65.6	195.5	218.6	276.0	222.0	282.0
23. Horses.....	Million head on hand	35.8	33.5	19.6	36.9	16.7	21.8	.....	21.9
24. Large-horned cattle.....	Million head on hand	60.6	70.5	40.7	80.9	57.0	65.5	.....	79.8
25. Sheep and goats.....	Million head on hand	121.2	146.7	52.1	160.9	81.3	96.0	.....	170.7
26. Pigs.....	Million head on hand	20.9	26.0	11.6	34.8	22.8	43.4	.....	45.6

^a 1939 production.

industrial production was in the hands of state enterprises, and virtually 100 per cent of the internal commerce of the country was carried on by state or collective enterprises.¹⁸

Results in Terms of Specific Commodities. In Table 56 we present statistics of the production of several important industrial and agricultural commodities in Soviet Russia in the years 1913, 1928, 1932, 1937, and 1940, together with the planned estimates of production for 1932, 1937, and 1942. It may be noted that the production of most of these commodities had been increased very greatly by 1937, as compared with 1913 and 1928, and that still greater accomplishments were planned for 1942. In some cases, production had exceeded the planned estimates, in others it had fallen a little short, and in still others it had missed the estimates by a wide margin. On the whole, however, the only reasonable comment on these statistics seems to be that they are remarkable, if accurate.

The Elimination of Depressions. Supporters of the Soviet régime are fond of referring to the U.S.S.R. as "the land without depressions," and in general its claim to this title seems to have some justification—although some critics are so unkind as to say that the apparent absence of cyclical fluctuations in Russia indicates merely that the country is in a state of perpetual depression. But whatever the level of economic activity may have been in Russia, it seems clear that this activity has not thus far been characterized by any of the business breakdowns which occur at frequent intervals in capitalistic countries.

This does not mean that instability of economic activity is impossible in Russia, and that business depressions or breakdowns could not occur there under any circumstances. It does mean, however, that if the Soviet system is well managed and if the desire to eliminate business depressions is sufficiently strong, Russia is in an advantageous position for maintaining economic stability. She is in a position, as we have seen, to avoid many of the types of waste which ordinarily characterize capitalistic states. Production is planned and controlled by society as a whole through governmental agencies and is not dependent, as in capitalistic countries, upon the decisions of thousands of independent and uncoordinated individuals. As a result, misdirected production should be less likely to occur in Russia than elsewhere. Of course, the planning authorities have to plan production for future markets, and it is likely that mistakes will be made in estimating consumers' needs or demands. However, since they are in a position to control prices as well as other economic matters, it will be possible to prevent such mistakes from clogging the markets with unsalable commodities, especially since it is not necessary in Russia for any particular commodities to sell at profitable or cost-covering prices.

Finally, the conflict between individual and social interests has been minimized in Russia. Economic activity is carried on in the interests of

¹⁸ M. T. Florinsky, *Toward an Understanding of the U.S.S.R.*, p. 173.

society as a whole, and its object is to produce goods in abundance rather than at a profit. In other words, there are no private enterprisers in Russian industry whose doubts and fears might at times lead them to restrict production, throw laborers out of work, and cut down their purchases of materials and supplies, because of a current or prospective lapse of profits. It is to the interests of Russians as producers to keep the wheels of industry turning just so long as it is to the interests of Russians as consumers to have the goods that are thus made available.

The Employment of Labor. Russia also likes to be known as "the land without unemployment." Indeed, the national constitution now promises every person a job. In the past, some Russians have been excluded from employment in socialized industries because of their connection with the old régime, but this policy has been discontinued. Certainly, Russia has had but little unemployment in the past. However, it must be noted that there is nothing about the Soviet system which inevitably rules out unemployment. But it seems probable that the planning authorities can prevent unemployment if they devote themselves to the task with wisdom and determination.

In capitalistic societies, laborers are put to work by the business enterprisers, who control the land and capital, only if it appears likely that profits can be made in this way. In the U.S.S.R., laborers work for the government—that is, for society as a whole—and it is profitable for society to put people to work just so long as human wants remain unsatisfied. In Russia, the question of profit from the employment of labor does not arise in the usual sense. The cost of putting additional laborers to work consists of turning over to these workers certain productive resources which could otherwise be used by laborers already at work. In other words, the cost of employing more labor is the necessity for those already at work to get along at least temporarily with smaller real incomes. But this reduction in real incomes for those previously employed will be merely temporary, unless the population of the country should become too large in comparison with the land and capital at its disposal. And even in this event, it would be both possible and desirable to keep at work all who are capable of contributing to production.

Workers' Gains. In addition to providing steady work for her people, Russia claimed to have benefited the workers in other important respects. The standard working day was seven hours in ordinary occupations, and six hours in dangerous trades and for all workers sixteen to eighteen years of age. The workers had every sixth day off. No employment of workers under sixteen years of age was permitted, except for training. The workers enjoyed a full social security program (except that unemployment insurance was not needed or included), and received annual vacations of two weeks to a month with full pay. Most Russian workers in the socialized economy were members of labor unions of the industrial type, and enjoyed

wages, hours, and working conditions which were arrived at by so-called collective bargaining. Most workers were on a piecework wage basis, with bonuses for quantity and quality, and assurance that piece rates would not be cut as the workers' earnings rose.

While some of these advantageous conditions had to be changed for the worse under the stress of emergency conditions arising out of measures for war and national defense, there is little doubt that, considering the limitations of their economic system, the Russian workers were well off just before the war began. This did not mean, of course, that their real incomes and scales of living were as high as those of American workers in similar positions. For a small per capita national income, such as Russia's, was certain to result in low real wages and scales of living, no matter how fairly and equitably that income was divided among the citizens, or how favorable the working conditions that were provided.

CRITICISMS OF RUSSIAN ECONOMIC PLANNING PRIOR TO 1941

Russian Statistics. We have no thought of suggesting that no problems remained unsolved in the U.S.S.R. as of 1941. Actually, the results of the Russian planned economy could be criticized in many ways. In the first place, there was the question of the reliability of the statistics on production, income, wages and other matters. Almost the only source of data was the Russian government itself (or various agencies of the government), and this was clearly a biased source. The Russian government, operating a planned economy in the midst of a skeptical world, was doubtless anxious to have its economic affairs appear in a favorable light, and there was a possibility that this government, like other governments, might touch up its statistics at times. Moreover, there was no way to check these statistics adequately, and thus to measure and correct any inaccuracies that might exist.

The Russian government and its agencies sometimes gave statistics in terms of "current rubles" and again in terms of "rubles of 1926-27 value." Data presented by different governmental agencies, covering exactly the same economic activities, often varied widely, and attempts were seldom made by these agencies to account for the discrepancies. However, it may be said for Russian statistics that they show both the successes and failures of planned operation, and that they would still indicate a remarkable degree of economic progress over a limited period of time, even if they had to be discounted by a very sizable fraction.

The Rapidity of Industrialization. Some critics, while conceding that rapid economic progress has been made in the U.S.S.R., were inclined to discount this progress because of the low level of economic activity from which the planned economy started. It is obviously much easier to

double a small national income than a large one. An absolute increase which would double the number of industrial workers employed in Russia might cause only a 10 per cent rise in the number employed in this country. It has been suggested that economic progress in Russia under planning proceeded but little, if any, faster than American economic progress in the early days of this country, if allowance is made for differences in the conditions under which the progress occurred. According to this analysis, economic activity in Russia will expand much more slowly in the future than in the past. As evidence on this point, the critics call attention to the fact that the third Five-Year Plan called for an increase in industrial output of only 92 per cent, as compared with 136 per cent for the first Five-Year Plan and 114 per cent for the second.

Opposed to these critics were others who claimed that the process of industrialization had been too rapid, so that waste and inefficiency resulted. They insisted that a more gradual process of industrialization would have produced much better results. The Russian planners have been greatly interested in large-scale enterprises and this interest is said to have interfered to some extent with rapid industrialization. For example, in setting up an electric heat-and-power station in Moscow, the plans called for a giant station with a capacity of 200,000 kilowatts. Construction was started in 1932, but the plant was still unfinished at the end of the second Five-Year Plan in 1937. If the Plan had called for 8 or 10 stations of 20,000 or 25,000 kilowatts each, some of the stations at least could have been in operation by 1937. It should be noted that there is now apparent in Russia a desire to set up plants of "optimum" size rather than those that are noteworthy chiefly by reason of their huge dimensions.

Industrial Production. The great increases in the output of manufactured goods through 1940 resulted, in large part, from the fact that the managers of Russian industrial enterprises concentrated attention on plan fulfillment in terms of physical quantities of goods, to the neglect of other aspects of the plans. Statistics on the output of physical quantities of goods tell us nothing about the quality of the goods; and outside critics and the Russian leaders themselves agree in complaining bitterly about the wretched quality of many Russian manufactured goods. Again, statistics on physical output do not give us any information as to labor efficiency and productivity or costs of production. By common consent of the outside critics and the Russian leaders, labor efficiency and productivity have never increased so rapidly as was planned, and have remained far short of the levels achieved in other countries. Increased physical output of goods in Russia has resulted largely from the use of increased physical quantities of the productive agents.

Statistics on the physical output of goods do not show what has happened to plant, machinery, and equipment in achieving the stated results. Obviously, an increase in the quantity of physical commodities must be

discounted to some extent if it has been obtained at the cost of an abnormal increase in the wearing-out and breaking-down of machinery and equipment; and this is true, also, of increases in the production of new capital goods if adequate provision has not been made for the maintenance and repair of old productive facilities. Many reports, including some from official Russian circles, indicate that the Soviet planners and industrial officials have been very lax with regard to such matters. The Russian industrial system has apparently suffered from a severe shortage of good managers, and the planners have had a difficult time trying to find a substitute for good management which would lead to business efficiency comparable to that furnished under capitalism by the competition of private interests.

While increases in the physical output of manufactured commodities were common, we should note that nothing like a steady or uniform rate of increase was maintained as between the various fields of industrial production prior to 1941. In this situation, any statement about an average percentage of plan fulfillment in industrial production is almost meaningless. If the industry producing automobile bodies fulfills its plan to the extent of 150 per cent, while the automobile tire and tube industry fulfills its plan to the extent of only 50 per cent, it seems rather silly to average these figures and announce that in these two branches of industry the plan fulfillment averaged 100 per cent. All these considerations undoubtedly qualify, though they do not cancel, the accomplishments and progress which were reported in the field of industrial production.

Agricultural Organization and Production. We have seen some of the difficulties which attended the operation of state farms, and may now note that the much more important collective farms also came in for a share of criticism in the period under discussion. They are said to have been so closely controlled by the government and representatives of the Communist party that they were cooperative in name only. The administration of the farms was often high-handed and arbitrary in its treatment of the individual collective farmers. A fairly large part of the output of the collective farms actually came from the individual homesteads or plots of land which the individual collective farmers were allowed to cultivate for themselves. Indeed, the managers of the collective farms, in despair over the prospect of increasing truly collective production, are said to have illegally turned over large quantities of collective land to the individual farm members for private cultivation in the hope, in this way, of fulfilling the plans for agriculture.

The distribution of income on the basis of "labor days" on the collective farms was complicated, cumbersome, and difficult to apply in agriculture. Moreover, the labor days credited to individual collective farmers too often depended more on the good or ill will of the farm officials than on individual productivity. In some cases too much of the income of col-

lective farms was devoted to the construction of community buildings, to administrative expenditures, and to actual production expenses, and too little was divided among the individual farmers. In this difficult situation with regard to positive incentives, the Russian leaders had to depend on negative incentives; and severe penalties were imposed for laxity, refusal to work, crimes (especially theft) against socialist property, and "counter-revolutionary" activities.

The production of leading farm crops in Russia lagged badly under the first Five-Year Plan, but showed considerable general improvement under the second Plan and, in some cases, under the third. However, these improvements must be discounted to some extent because of the adoption of the practice of measuring the crops in terms of biological yield (the amount of crops in the field less a fixed deduction for loss in harvesting) rather than actual yield, and because the increased yields could be accounted for largely in terms of increases in the quantity of land under cultivation rather than in terms of increased yield per unit of land. The results obtained in livestock production were particularly unsatisfactory. Some progress was made from the low point reached at the end of the first Five-Year Plan, but the goals of the third Plan were still below those of the first for two important divisions of livestock.

The Distribution of Income. According to almost every estimate that has been made, inequality in the distribution of income in Russia has been small in comparison with that which exists in leading capitalistic countries. However, many critics contend that the differences in income in Russia have been (1) much greater than the Russian leaders are willing to admit and (2) much too great to be consistent with the ideals of modern socialism. It is also held that the commodities and services distributed by the government without charge were divided up in such a way as to increase rather than diminish the inequality which is based on the size of money incomes. That is to say, the persons who drew the largest salaries are said to have been granted, also, the free use of magnificent houses or apartments, country estates, rest homes and sanatoria, expensive limousines, superior educational facilities for their children, and other advantages to which the ordinary citizens had little or no access.

The distribution of income in Russia has been criticized both for having too little inequality, and for having too much. According to most observers, the major weaknesses of the Russian planned economy have included, among other things, low efficiency and productivity on the part of labor of all grades, including management, and the failure to develop loyalty, disinterestedness, and devotion to duty as rapidly as had been expected. These are exactly the shortcomings we should expect to find if the Russian combination of economic rewards and other motivating factors were inadequate to provide incentives for all the people.

In the period under discussion, however, these difficulties could be

attributed in part at least to other factors. Because of the speed with which the Russian economy had been industrialized and mechanized, the Russian labor force in industry and some other fields had grown very rapidly, and there had never been a time when this labor force as a whole could be considered properly trained and experienced. Russian workers found it difficult to adjust themselves quickly to the strict regimen of urban industrial life, and they were inclined at times to be late for work, to miss work altogether if they wished to stay away on a given day, to "take it easy" on the job, to disregard safety rules, and to be careless in the use of materials and equipment. Conscious of a general shortage of labor in industry and certain that they could get a job almost anywhere, the workers were disposed to change jobs frequently and to move from one place to another in search of more favorable opportunities. The low productivity of other grades of labor was also due in part to the inefficiency of management. All or most of these difficulties may conceivably disappear when the Russian planned economy has been operating for a longer time. If they do not, and if labor efficiency and productivity remain low after (let us say) a generation or more of experience with modern industrialism, there will be strong reason to doubt the effectiveness of the Russian system of incentives.

Labor Conditions. It is necessary to discount considerably the conclusion reached by supporters of the system that Russia was a kind of workers' paradise in the period under discussion. Russian workers of ordinary grades were perhaps fortunate in living in an economic system in which virtually all the income available for consumption was distributed in the form of wages, and in which differences between individuals with respect to money income were relatively small. However, we must remember that real wages depend upon both the total productivity of the economic system and the way the total income is divided among the people. If the national income as a whole is too small, it could be divided with absolute fairness, or with complete equality, without producing a high level of economic welfare for individual members of the society in question.

While grave difficulties are involved in estimating the exact income status of the Russian workers prior to 1941, the consensus seems to be that their real incomes and standards of living, although gradually improving, remained low in comparison with those of the workers of many other countries. For example, if we value the ruble at the nominal rate of five to the dollar, the entire Russian national income of 125.5 billion rubles in 1940 amounted to a little over 25 billion dollars for some 193,000,000 people, or about \$130 per capita. And the evaluation of the ruble at five to the dollar is said to be a gross exaggeration of its purchasing power in Russia.

The wage rate structure, hours of work, and other working conditions of Russian labor, as provided by basic laws and decrees, appear to have

been relatively satisfactory. However, critics of the Russian system contend that all these things were meaningless except as a device for deceiving outside observers of the Soviet system. The managers of Russian enterprises were under great pressure to fulfill the plans for production, and were subject to severe punishment if they failed to do so. As the lesser of two evils, they sometimes openly violated the conditions of the Labor Code and of collective agreements based on it. Other undesirable results came from the attempt to use the piecework basis of wage payment for various types of work which, in other countries, would not be considered well suited for this system.

Harassed by problems of labor turnover, absenteeism, and tardiness, the Russian leaders imposed severe regulations calculated to bind the workers to their jobs, get them to work on time, and keep them coming to work every day. While most Russian workers were members of labor unions, the critics allege that the supposed functions of these unions were merely another case of window-dressing. The unions are said to have been completely unable to protect the workers against summary dismissal, eviction, or imprisonment; against violations of the wages, hours, and working conditions provided by law; or against the violation of safety codes and other protective measures. The cooperation of unions with management, it is charged, meant merely that the unions functioned as slave-drivers, employment bureaus, and collectors of forced loans. The unions represented the ruling bureaucracy and not the workers. According to this opinion, real labor unions did not exist in Russia any more than in Nazi Germany.

The Issue of Freedom. Finally, with regard to the question of freedom for the individual, it is difficult to condemn the pre-1941 Russian system too strongly. In spite of the democratic façade which the constitution provided, the government of Soviet Russia was a dictatorship of the most absolute and complete type, with the few leaders of the Communist party in full control. This dictatorship was the complete antithesis of the political democracy which modern collectivists expect to find in their ideal system. Moreover, the situation in the strictly economic field was not much better. The individual citizens of Russia were, by the nature of the system, deprived of many of the economic rights which people enjoy under capitalistic institutions. The numerous and severe restrictions imposed on the workers indicated that these Russians had very little of the freedom of occupational choice that is supposed to be a feature of socialism. They had more freedom in spending their money incomes, but even here their choice of goods was much more restricted than it would be under ideal socialism. On the whole, it was this lack of political and economic freedom which has caused so many people to wonder whether the Russian system should be described as socialistic, and whether comprehensive economic planning and democracy may not be incompatible.

SOVIET RUSSIA IN WORLD WAR II

Early Economic Losses. After the beginning of the war with Germany, the Russians gave ground rather rapidly before the invaders. From June, 1941, to the end of 1942, the part of Russia conquered by Germany was as large as the eastern and southern portions of the United States, including Texas. The area contained half of Russia's working coal mines and 37 per cent of her railroad mileage. It had formerly produced 45 per cent of Russia's wheat, 41 per cent of the rye, 90 per cent of the sugar beets, two-thirds of the iron ore, 60 per cent of the pig iron, half of the steel, 25 per cent of the machines, and half of the electric power.¹⁹ Many people outside of Russia felt sure that these losses would soon prove crippling.

Production Successes. But in spite of the losses just listed, Russia's war production on the whole was not only maintained but increased. The secret of this success was the rapid development of the Ural and Siberian regions. The machines and equipment of whole factories were "leapfrogged" from western Russia to these new regions. In preparation for such a development, machines had been lightly anchored in place and numbered for reassembling. They were loaded on cars, sometimes several thousand cars to a factory, and moved hundreds or thousands of miles. In the new regions far to the east, sites had been cleared in readiness or were rapidly cleared. Some factory buildings had already been constructed and others were soon erected. Sometimes large numbers of workers were moved, along with the machinery and equipment, and were housed in hastily constructed barracks.²⁰

The Russians had large stock piles of some essential materials, and were also able to rely on local materials in the new regions to a considerable extent. The Ural region, for example, contains all but four of the known chemical elements.²¹ Reliance was also placed on intensification of the workers' efforts, curtailed replacements of machinery in non-essential fields of production, standardization of products, improvisation, and training on the job. Women and young people of both sexes were brought into employment, given rapid training, and stimulated by honors and socialist competition. Housewives were changed into factory workers in two weeks' time. Technical training programs were rapidly extended and eventually included about half of all students beyond the seventh grade.

In agriculture, war losses of acreage were rapidly replaced as some 3¾ million acres were brought into use in Siberia, 2½ million acres of victory gardens were cultivated by 10 million people, another 2½ million acres were cultivated through factory auxiliary-farms, and some 20 million

¹⁹ E. Snow, *People on Our Side*, pp. 69, 70; and M. Dobb, *Soviet Planning and Labor in Peace and War*, New York, International Publishers, 1943, pp. 101, 102.

²⁰ *Ibid.*, pp. 102-107.

²¹ E. Snow, *People on Our Side*, p. 147.

acres were brought into use by collective and state farms which had not been overrun by the invaders. Working days per individual on the collective farms were stepped up sharply. By 1943, some 70 per cent of all agricultural workers were women, and a million more women were in training to handle heavy machinery.²²

In comparison with what most people expected, Russian war production was truly prodigious. Indeed, Russia conducted the war against Germany almost entirely on her own power in 1941 and 1942. From the beginning of the war through the siege of Stalingrad, Russia received only about a billion dollars' worth of aid from the United States and Britain, and such an amount of munitions and supplies did not go far in World War II. On the other hand, Russia required large amounts of material assistance from her Allies in order to drive the enemy out of the country and back to the heart of Germany.

The Problem of Rehabilitation. Under the circumstances prevailing at the time, it was not surprising that Russia failed to adopt a new Five-Year Plan in 1943, but instead embarked on a course of rehabilitating the devastated areas of the country as fast as they were reconquered. Some 1710 towns and cities, 70,000 villages, and 6 million buildings had been partly or completely destroyed, and 25 million people had been made homeless. About 32,000 industrial plants and 98,000 collective farms had been ruined. The total damage was estimated at 679 billion rubles at 1941 prices.²³ Accordingly the Russians set out to build or rebuild several million square meters of dwelling space, and thousands of factories, schools, and hospitals. Millions of cattle, sheep, goats, and horses were returned to the west, thousands of tons of seed were made available for reconquered areas, thousands of tractors were brought back from the east, hundreds of machine-tractor stations and tractor repair shops were rebuilt, thousands of agricultural leaders and specialists were brought back, railroad lines were restored, and railroad stations were rebuilt.²⁴

THE FOURTH FIVE-YEAR PLAN

Details of the Plan. By April, 1946, about a year after the end of the war with Germany, Russia was ready to embark on a fourth Five-Year Plan, even though the work of rehabilitation was only moderately well under way. The new plan seems about as ambitious as its predecessors. By 1950, the gross product of industry is to be increased to 205 billion rubles (as compared with 137.5 billions in 1940), and the production of food and other consumers' goods is to increase by 17 per cent a year over

²² *Ibid.*, pp. 103-110.

²³ *International Labor Review*, January-February, 1946, p. 71.

²⁴ *Ibid.*, p. 72; and *The U.S.S.R. in Reconstruction*, New York, American-Russian Institute, 1944, p. 43.

the period. Agricultural production in 1950 is to be 27 per cent above that of 1940. New capital investments are to amount to 157.5 billion rubles over the five years, and new agricultural machinery valued at 4½ billion rubles is to be supplied. National income will increase, according to the Plan, to 177 billion rubles in 1950, as compared with 125.5 billions in 1940.

Employment in the national economy (government owned and operated) in 1950 is to reach 33.5 million workers, an increase of 6.25 millions in five years. Wages on the average are to increase to 500 rubles per month. Labor productivity is to increase by 36 per cent over the pre-war level, and 70 per cent of the general growth of industrial production is to depend

TABLE 57. PRODUCTION OF SELECTED COMMODITIES IN SOVIET RUSSIA IN 1940, AND PRODUCTION PLANNED FOR 1950

(Source: *Soviet Russia Today*, May, 1946, p. 33)

Item	Units	Actual Production in 1940	Production Planned for 1950
Petroleum	Million tons	34.2	35.4
Coal	Million tons	164.7	250.0
Electric power	Billion kilowatt-hours	48.2	82.0
Pig iron	Million tons	14.9	19.5
Steel	Million tons	18.4	25.4
Copper	Thousand tons	157.0	251.2
Automobiles	Thousands	194.9	500.0
Locomotives	Thousands	1.6	3.8
Grains	Million metric quintals	1190.0	1273.3
Raw cotton	Million metric quintals	25.2	31.5
Flax	Million metric quintals	6.7	9.3
Sugar beets	Million metric quintals	222.0	270.8
Cattle (on collective farms)	Million head on hand	20.1	25.9
Sheep and goats (on collective farms)	Million head on hand	42.0	68.1
Pigs (on collective farms)	Million head on hand	8.2	11.1

on this factor. Expenditures on education and culture will increase to 106 billion rubles over the period, or 2¼ times the pre-war expenditures; technical schools will be expanded to accommodate 1.2 million students; and some 42.3 billion rubles will be spent for the construction of 72.4 million square meters of new housing (as compared with 15.5 billion rubles and 30 million square meters under the third Plan). Small hydro-electric stations with an aggregate capacity of one million kilowatts will be constructed for rural electrification; over 3 million acres of land will be reclaimed by irrigation or drainage; and over 40 billion rubles will go into the restoration and development of railroad transportation.²⁵

In Table 57 we present the estimates of planned production of a number of important commodities in 1950 in comparison with actual produc-

²⁵ *Soviet Russia Today*, May, 1946, pp. 32, 33, and December, 1946, pp. 9-10.

tion in 1940. It will be noted that some of the goals of the fourth Five-Year Plan are only slightly higher than those reached in 1940, but in most cases very large increases in production are expected. Whether or not these increases can actually be achieved remains to be seen. In the meantime, the Russians are at least entitled to an "E for effort."

CONCLUSION

Returning now to the present, we note that it is difficult to make an appraisal of the Russian system on the basis of the available mass of conflicting evidence and argument. Soviet Russia has shown that it is possible for a planned economy to continue operating, to eliminate some of the types of waste and inefficiency which prevail under capitalism, and to make considerable economic progress. On the other hand, Russia has encountered many serious economic problems in operating her planned economy and has clearly demonstrated that not all types of waste and inefficiency are peculiar to capitalistic systems. The supporters of Soviet Russia attribute these wastes and inefficiencies largely to the extreme youth and inexperience of the Russian planned economy. They expect that these difficulties will gradually disappear, and that the Russian system will steadily improve in efficiency and productivity.

The critics believe that many types of waste and inefficiency are inherent in the nature of the Russian planned economy and will prove as troublesome in the future as in the past. They attribute Russia's past progress under the planned economy largely to two factors: (1) the fact that Russia has been experiencing a tremendous building boom such as various capitalistic economies have had at times, and (2) the fact that the planned economy started with a situation in which the people were short of almost all kinds of commodities and services, so that they would eagerly accept almost any kinds of goods which the planners decided to produce—a situation, in other words, in which almost any planned decisions would seem reasonably correct. They predict, therefore, that Russia in the future will have grave difficulty in maintaining her past rate of progress. While we cannot be sure that either of these opinions is correct, or predict definitely the results which the Russian planned economy will produce in the future, it seems clear that the Russian system, though it furnishes some kind of an alternative to capitalism, is far from being the type of economic system which most Americans would choose in preference to their own system of free enterprise, even though the latter is beset by economic maladjustments for which adequate solutions have not yet been found, or if found have yet to be applied.

1. What is the importance, to students of economics, of examining the operation of the Russian planned economy?
2. Explain the organization of the Communist party, and its importance in Russian political and economic affairs.
3. Outline the governmental organization of the U.S.S.R.
4. Is the government of the U.S.S.R. really as democratic as its constitution suggests? Explain.
5. How are economic activities planned in Russia?
6. Why is it often said that Russia has a "two-way" system of economic planning?
7. Distinguish between the functions of plants, trusts, and administrations in Russian industry.
8. Is the relationship of prices to costs of production a significant one in the Soviet economy? Explain.
9. Are there reasons for expecting that planned production can be adapted to the wants of consumers in Russia? Explain.
10. How does the status of agriculture differ from that of industry in the U.S.S.R.? Explain.
11. How do state farms, collective farms, and individual peasant farms differ in organization, operation, and importance?
12. What are the factors which determine the amount of income which a worker on a collective farm will receive in a given year? Explain.
13. As a Russian farm worker, would you prefer to be on a state farm or collective farm? Why?
14. How are existing supplies of land and capital apportioned among the various industries in Russia?
15. How is the total volume of saving and investment, in terms of physical units, controlled in the U.S.S.R.?
16. How are financial results made to match the physical results in connection with the process of saving and capital formation?
17. Why is it true that the cost of obtaining capital goods is the same in Russia as in any other type of economic system?
18. On what basis is the Russian labor supply distributed among occupations and industries?
19. Why are differences in wages permitted among workers in Russia?
20. How great are these wage differences? Explain.
21. Explain the various ways in which consumers' goods have been distributed among consumers in Russia.
22. What progress has the Russian economy made toward its goal of having a single set of merchandising units selling to all purchasers at a single scale of prices?
23. How is international trade handled by Soviet Russia?
24. How does the monetary problem in Russia differ from that faced by the governments of other countries? Explain.
25. Give a general estimate of the results of planned operation in the Russian economy.
26. "The rapid industrialization of the U.S.S.R. may be considered as either an advantage or a disadvantage." Explain.
27. Is Russia "the land without depressions"? Why?

28. Why is it difficult to evaluate the economic accomplishments and failures of the U.S.S.R?
29. Make an appraisal of planned industrial production in Soviet Russia.
30. What are the chief shortcomings of agricultural organization and operation in Soviet Russia?
31. "The distribution of income in Soviet Russia has been criticized both for having too little inequality, and for having too much." Explain.
32. Would you say that the Soviet Russian system is a kind of workers' paradise? Explain.
33. What is the significance of the "issue of freedom" in evaluating the Soviet Russian system?
34. Indicate the economic losses which the U.S.S.R. suffered early in her recent war with Germany.
35. How was Russia able to maintain and even expand war production in spite of the loss of important territory? Explain.
36. Why was no new Five-Year Plan undertaken by Russia between 1942 and 1946?
37. "The fourth Five-Year Plan seems to be as ambitious as any of the others." Explain.

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Fascism

SOCIALISM IS NOT THE ONLY ALTERNATIVE TO CAPITALISM THAT HAS BEEN available in recent years, for a number of countries have been operating under another type of system known as fascism. While the most important fascist systems—those of Germany and Italy—were liquidated by their defeat in World War II, it is still too early to conclude that fascism is dead and buried and can safely be relegated to the history books. Hence we shall examine briefly the nature of fascist governmental and economic systems.

FASCIST GOVERNMENT

The Dictatorship. Using the German and Italian systems as examples of fascism, we may note that the fascists came into power by securing control over the existing forms and agencies of government, rather than by revolution or the violent overthrow of existing governments. Once in power, the fascists went on to eliminate some governmental institutions completely, to purge or “purify” others to suit their purposes, and to permit still others to go on functioning virtually without change. The result was a very strong central government which exercised rigid control over the activities of lesser governmental units and of private individuals. And the powers of the central government were concentrated to an almost unbelievable extent in the hands of one man, the great leader and dictator, and his trusted associates.

In the governments of fascist countries, the executive department of the government was supreme. The dictator himself held the highest executive office in the government, and other key positions as well, and his loyal henchmen held most of the other important positions. As many governmental posts as possible were filled by appointment rather than election, to guard against the possibility that undesirable characters might get into office. Legislatures were retained, but seemed to serve no very useful purpose. They met rarely, did very little legislating since the dictators had the power to make laws by decree, and functioned primarily as sounding boards and cheering sections for party propaganda and declarations of the dictators as to accomplishments and policies. The existing court systems were retained in general, but non-fascist judges were re-

placed by loyal fascists. The courts had no power to restrain the executive department of the government, their functioning being limited to dispensing the fascist version of "justice." The fascists took a very serious view of political crimes, or offenses against the state, the fascist party, or the dictator; set up special courts to give short shrift to persons accused of such offenses; and maintained a powerful and dreaded secret police force, operating at least partly outside the laws and forms of government, to ferret out such persons, round them up, and bring them to justice.

The Fascist Party. The fascist countries, like Soviet Russia, had one-party systems of government. In each country, no political parties or organizations were tolerated except the fascist party, by whatever name it might be called. The fascist party in each case had only a few million members and included only a very small part of the citizens of the country. Except by special permission from above and in highly exceptional cases, the party did not accept new adult members. Instead, it relied upon the development of new members from junior fascist organizations. Both boys and girls were members of youth organizations, which included groups of all ages from 5 to 6 up to 21. Several million budding fascists were to be found in the various youth organizations of each important fascist country.

The requirements for party membership were rather severe, and included blind devotion, loyalty, and obedience to the leader or dictator, and a willingness to devote one's time, labor, and money or other resources to the objectives of the leader and the party. The members of the party were reexamined periodically to see if they were exhibiting the prescribed fascist virtues. If found wanting, they were at least expelled from the party, and were sometimes jailed or even liquidated. Nevertheless, party membership was eagerly sought in the heyday of fascism, for it carried with it both prestige and a variety of economic advantages.

The identification of fascist party and government was virtually complete. The dictator or head of the government was also the leader of the party. His trusted associates were high officials of both party and government. The party had a cabinet which paralleled the cabinet of the government and contained many of the same people. All along the line, governmental officials and agencies were matched by party officials and agencies with considerable overlapping of personnel. As head of the government, the dictator had general charge of appointments to governmental positions, and as head of the party he had similar charge of appointments to positions in the party. Thus, for all practical purposes, the fascist party was the government.

Individual Liberties. In each country, the fascist party regarded democracy as useless and an evidence of weakness on the part of a nation, and found it desirable to suppress practically all rights and liberties of individuals. Freedom of assembly did not exist outside the all-powerful

party. Freedom of speech was a meaningless term, for any criticism of, or outspoken opposition to, acts and policies of the government or fascist party was likely to be interpreted as treason. The press was also controlled entirely by the government and printed only government-approved "news." Education was strictly controlled by the government, in order that the principles of fascism might be inculcated in the youth of the land. In Germany, even religion became largely a function of the ruling party. Religious leaders were displaced by other persons who would be amenable to the wishes of the party and would extoll the virtues of fascism, and it was reported that the Bible had been rewritten to conform to party principles. In Italy, however, the Catholic Church continued to function on the basis of an agreement with the ruling party, although relationships between the church and the government were not particularly cordial.

Under fascism, a man's house was not his castle if we may believe the critics of fascism. A citizen's house was likely to be invaded and his personal possessions destroyed at any time by governmental representatives acting without warrant. He could be arrested without warrant, tried without jury or legal representation, and given an exceedingly severe sentence. The law was whatever the leaders said it was. It could be one thing one day, and quite another the next. A man could be punished, under retroactive laws, for an act which was not a crime or a misdemeanor at the time at which it took place. He could be punished for crimes which it was presumed he would commit in the future, and for offenses which others might conceivably commit against him—this last type of punishment being called "protective arrest." He could be confined without specific charges being lodged against him. He could be arrested and punished merely for stating that a crime had been committed—the name of this offense being "the spreading of atrocity legends." Moreover, the people of the fascist countries were subjected to espionage on the part of the government to an extent which has seldom been equaled.

About the only right which was left to the individual citizens was the right to vote, and this did not amount to much since comparatively few governmental offices were filled by election. However, the ruling party would stage an occasional election of the figurehead legislature or a referendum on the policies which the government had been following over a period of time. On these occasions, great pains were taken to see that the people came out to vote, and that they voted as the leaders desired. The results of the elections or referendums were a foregone conclusion.

The Suppression of Opposition. Opposition to fascism was regarded as a kind of social disease which had to be eradicated as quickly as possible, and the favorite method of eradication was violence. Sluggings, beatings, and other forms of mob violence were common. Large numbers of people were murdered outright. Far larger numbers were thrown into prison, or

into concentration camps similar to the camps maintained for prisoners in time of war. Many people simply vanished completely, leaving no trace. Others allegedly committed suicide because they feared arrest and punishment. In jails and concentration camps, the mortality due to pneumonia and other "natural causes" was extraordinarily high, and many prisoners were reported to have been "shot while trying to escape."

In Germany more than in Italy, the program of suppression had a strong racial tinge. Opposition had to be suppressed for the good of the state, but that was considered synonymous with the good of the race. According to the party program, none but members of the nation could be citizens of the state, and none but those of German (or Aryan) blood could be members of the nation. No Jew, therefore, could be a member of the nation, and much of the fascist program of persecution and terrorism was directed against the Jews. The Germans were said to be psychologically powerless to admit that the loss of World War I and the unfortunate economic conditions which followed were due to any faults of their own. They held that the war was lost because of the treachery and duplicity of the Jews at home, and that the Jews were responsible, also, for the unfavorable economic conditions of the post-war years. Moreover, economic recovery and prosperity were said to wait upon the elimination of the Jews from the population.

According to Jewish refugees from Germany, it is impossible to describe briefly the treatment to which the Jews were subjected under fascism. They were deprived of citizenship and the right to vote. They were cast out of the professions, such as teaching, medicine, journalism, and the law. They could not belong to labor unions, or work in retail and mercantile fields. Their property was confiscated in many cases, and they themselves were subjected to close espionage. The rights of their children to education were curtailed, as was also their right to make a livelihood through the use of land. They suffered personal indignities and physical violence, and severe injury or death was the portion of many. Some of the more fortunate were able to flee the country, but those who remained lived in a constant state of terror and abject misery, if indeed they lived at all.

In Italy the campaign of suppression was directed chiefly against living persons, and especially against those in Italy at the time; but in Germany the works of famous German writers of the past and of citizens of other countries were condemned by the fascists. Such works were banned from circulation, and were burned in monster bonfires staged for this purpose. Objectionable paintings were removed from art galleries, and other works of art destroyed. Even the performance of musical compositions by certain composers was forbidden. The fascists declared that the German nation and race should work out its own art and culture, so that they might be free from alien contamination.

Italy, in the early days of fascism, was not conscious of a "Jewish problem" that needed attention. Later on, however, the assumed necessity for a common front between the fascist nations led the fascist government of Italy to introduce a program of anti-Semitism, even though the Jews in Italy numbered only about 50,000 out of a total population of 43,000,000. It was said that the Italian government experienced great difficulty in arousing enthusiasm for this program since many Italian people had never even seen a Jew.

The Individual and the State. The fascist philosophy required a strong central government to which the individual citizens were subjected and subordinated. Ordinary individuals were considered too ignorant or too thoroughly immersed in the private affairs of life to carry on the affairs of government successfully. This task had to be undertaken by the chosen few, who were found in the fascist party. The subordination of the individual to the state was not for his own good, as in Russia, but for the good of the state. The state was thought of as something more than an aggregate of the individuals who made it up at any particular time. For fascism, society seemed to have historical and immanent ends of preservation, expansion, and improvement quite distinct from those of the individuals who at a given time composed it; so distinct in fact that they might even be in opposition.¹ Individuals were regarded as merely the means by which society might reach its goals, and as but temporary and relatively unimportant elements in the long life of the state.

Moreover, according to the fascist philosophy, the individual cannot exist without the state. Apart from the state, the individual has no more purpose or reason for being than has one body cell isolated from the human body. For the individual to assert his rights against the state would be as ridiculous as for a body cell to rebel against the body as a whole. Thus, the individual has no rights which are superior to those of the state. He has merely a duty toward the state and, in performing this duty, he may be expected to sacrifice everything, even life itself. The interests of the state permeate all activities of the individual, and not merely his political activities. This general theory helps to explain why the rights of individuals, as we are accustomed to view them, were largely suppressed in the fascist countries. The fascist theory of the state was seen in action in the economic policies of fascism, most of which were intended to promote the greater glory of the nation, rather than the welfare of the individual citizens.

FASCIST ECONOMIC ORGANIZATION AND POLICY

Economic Institutions of Fascism. The operation of fascist economic systems involved no change in the nominal character of the economic in-

¹ Julia E. Johnsen, compiler, *Capitalism and Its Alternatives*, New York, H. W. Wilson Company, 1933, p. 376.

stitutions of the countries. The fascist leaders, in other words, professed great admiration and respect for private property, free enterprise, individual initiative, and competition, and proposed to rely on these capitalistic institutions for the operation of the economic system so far as this course of action produced desirable results. However, the goals of the state or nation were to be supreme; and, if the operation of capitalistic institutions tended to produce results which were inconsistent with state objectives, the government would have to step in with appropriate interferences and controls.

The fascist leaders declared repeatedly that they did not intend to set up an economic system like that of Soviet Russia, in which the state owns and operates the basic means of production, and individual initiative is weakened if not destroyed. Indeed, the system was not intended to be permanently even a governmentally controlled system. The government did not propose to direct industry and trade in the long run, but intended merely to open up the way for private industry and trade. In practice, however, as the fascist countries moved into preparation for war and finally war itself, the government found it necessary to direct and control the economic system more and more completely, and its interferences in all types of economic activity multiplied rapidly. In the latter days of fascism, the economic system came to be controlled by the government as completely as that of Soviet Russia, though by different methods. The fascist economies also came to be planned economies, though the planning which took place was more opportunistic and less formal than that of Russia.

The Control of Industry. Strict governmental control over industrial production was, of course, a basic feature of the fascist economies. Long before these systems met their end, enterprisers in industry were being told what they could and could not produce; how much to produce of various goods; how many hours a week they could or should operate; whether they could replace machinery and equipment and, if so, at what prices; whether they could have any raw materials and, if so, how much and at what cost; whether they could import or export anything and, if so, in what quantities and at what prices; how many workers they could have, how many hours per day the workers could be employed, and what they should be paid; what prices could be charged for finished products, and a number of other things. Underneath this thick layer of governmental controls, industrial enterprises were still privately owned and operated, and were supposed to operate for profit as usual.

The control of production was accomplished through a complex network of governmental agencies constructed for the purpose. These agencies were so numerous and complicated that it does not seem worth while to study them in detail in a book of this kind, now that they have ceased to function. The control agencies normally included representatives of business enterprisers and the government, and sometimes admitted

workers' representatives as well. In drawing up the regulations which would govern production, attention was usually paid to the wishes of business men as well as those of the government. Once the regulations had received the approval of high governmental and party officials, they operated with the force of law on all enterprises subject to them. Since productive enterprises were still privately owned and operated, they still required the stimulus of "profits," and the regulation of production was usually so contrived that business men could make plenty of money, though governmental control over production was complete.

The Control of Agriculture. Fascist production controls extended to agriculture as well as industry. Production, price, and marketing controls were exercised through agencies similar to those for industrial control. Programs of land reclamation and resettlement were undertaken, the movement of labor into and out of agriculture was controlled, subsidies in cash or kind were paid to the growers of various crops, and the prices of some products were raised in an effort to stimulate production under the self-sufficiency program. In Germany an effort was made to provide a new status for deserving farmers; that is, if the farms and their owners qualified for the honor, the farms could be made hereditary and inalienable, and not subject to sale, mortgage, or division, and the owners acquired the right to call themselves "Peasants."

The fascist farm policies undoubtedly contributed something to the state or national objectives of economic independence and preparedness for war, but they were of little benefit to the ordinary farmer. No really determined attack was made on many fundamental farm problems, such as tremendous concentration in the ownership of farm land, farm tenancy, and the great disparities in income and economic welfare which existed between poor and prosperous farmers. Even the increased prices of farm products brought no benefit to the ordinary farmers, who usually consumed all they were able to produce and even had to buy more in many cases. The government's subsidies, free labor, and other benefits for farmers also went primarily to the large farmers.

The Control of Marketing. In wholesaling, retailing, and other branches of marketing, the fascist government used control agencies and regulations similar to those employed in other fields, and the individual enterpriser was tied hand and foot in this field as elsewhere. The policies of economic self-sufficiency and preparation for war resulted in severe shortages of ordinary consumers' goods and a thoroughgoing system of rationing became necessary. This rationing program may have served to distribute fairly equitably among the citizens the burdens and hardships resulting from other fascist economic policies, but the rations made available to the people inevitably resulted in restricted consumption and lowered scales of living.

General systems of price control were also put into operation in the

fascist countries, and were undoubtedly necessary and desirable in view of the other economic policies which were being followed. However, since the price controls were imposed not on governmental enterprises but on private enterprises operated for profit, they operated none too efficiently and many devices for evading them were invented and adopted by business men. Among these were simple black-market dealings, combination sales, the upgrading of commodities, reductions in quality, reductions of quantities in packages, the multiplication of new products and brands, and concentration on the higher-priced varieties of goods. Thus, effective stabilization of prices occurred only in the official statistics or price indexes of the fascist governments, despite the severe penalties which were provided for violations of the price decrees.

The Control of Banking and Credit. Familiar control agencies and regulations appeared in the fields of commercial and investment credit and banking in the fascist countries. In commercial banking, individual banks were licensed and controls were imposed on interest rates, the sizes of loans which could be made to various firms and enterprises, and the size of bank reserves and the forms in which they should be held. Each banker was practically a state official as well as a private enterpriser, and was likely to have a party man to watch over and "protect" him at all times. When instructed by the government, and without regard for his own opinions and desires, he had to advise his customers to purchase government bonds or the securities of new concerns which were being set up to produce ersatz or substitute products under the national self-sufficiency program. He had to hold the official, optimistic view of state finances. He had to try to restrain individuals who wanted to withdraw their deposits for private uses, report those who did make large-scale withdrawals, and inform the government about individual customers who had large liquid balances.

In the field of investment credit and banking, there were also many controls. Interest rates on other securities were beaten down by the government in order to create a more favorable market for government bonds. The dividends which corporations were allowed to pay on their stocks were strictly limited. The earnings which the concerns were thus compelled to retain might be invested in the same lines of production if the corporations were producing articles which were of importance under the self-sufficiency or armaments programs. Otherwise, the government would "persuade" the corporations to invest their earnings in new companies which would contribute to such programs, or in government bonds which would place the funds directly at the disposal of the government for the same purposes. New security issues on the part of private industrial and business concerns were severely curtailed, and private firms were made to look to the government for investment funds. Firms producing ordinary consumers' goods were not allowed to sell new securities, could

not obtain additional investment funds from the government, and under price control were often unable to acquire adequate earnings of their own for purposes of reinvestment. Thus the entire investment-credit mechanism was brought under the thumb of the government and investment funds were diverted into fields of production which were deemed consistent with the attainment of national objectives.

The Control of International Trade. The governments of the fascist countries used every device in the books in their efforts to control the foreign trade of their countries. The methods employed included protective tariffs, import and export licenses and quotas, foreign exchange controls, export subsidies, private trading agreements, clearing agreements, payments agreements, direct intergovernmental barter deals, and other devices. However, the fascist countries did not maintain a very large volume of international trade on the basis of these controls, and soon turned to comprehensive programs for achieving national economic self-sufficiency. As we noted in Chapter 42, these self-sufficiency programs included increasing the production of articles which were already being made in the fascist countries in amounts inadequate for domestic needs, attempting to substitute articles which were relatively less scarce for others which were relatively more scarce, and producing artificial substitutes for articles which could not be produced in the fascist countries by natural methods. There are obviously no direct gains in terms of maximizing production and scales of living to be obtained from the curtailment of international trade and the development of national economic self-sufficiency. The most that can be said of these policies, as of other fascist control policies, is that they were apparently consistent with the national goals of independence and readiness for aggressive warfare.

The Control of Labor and Industrial Relations. Labor and the relations of workers and employers, like virtually everything else, came in for very rigorous control by the governments of the fascist countries. The fascist leaders wanted to maintain industrial peace in the interests of full production and they succeeded in doing so, but only at great cost to the workers, if not to the employers. All labor unions were smashed and liquidated, along with their headquarters, meeting halls, and publishing plants. Their newspapers were suppressed, and their funds taken over by the government. The workers were forced into government-inspired and -controlled organizations, headed by party men and interested primarily in seeing that the interests of the nation (as the fascist leaders saw them) did not suffer as a result of anything that went on in the field of industrial relations. The workers had no real right to bargain collectively with their employers. They were allowed to use none of the weapons of industrial conflict, such as strikes and picketing, to bring their desires forcefully to the attention of their employers. And the wages, hours, and working conditions which are so important to workers were determined,

except for the supervision and intervention of the government and its agencies, by the fiat of the employers and at their pleasure.

The employers were also deprived of their usual private organizations, they were called upon to give up their tried and true weapons and practices of industrial conflict, and they were subjected to many burdens by the government and the fascist party. However, except for governmental intervention, the employers still held the upper hand in their direct dealings with the workers because of their natural superiority of bargaining power. The equal treatment of parties unequal in strength still leaves them unequal in strength. The fascist governments made an effort to protect the workers from the rapaciousness of the employers through confidential councils, labor trustees, labor courts, and courts of social honor, but there is reason to suspect that these elaborate devices were far from completely successful.

The situation of the workers of the fascist countries with respect to wages, hours of work, and working conditions in general was not favorable even before World War II, and in the war period it became steadily worse. The famous (or infamous) work-books or labor passports, wages frozen at unsatisfactory levels, the conscription or drafting of workers of almost all kinds, the freezing of workers in their jobs, the application of military or semimilitary regulations to the workers, severe penalties for breaches of labor discipline, and the suspension of former legal restrictions on hours of work and other working conditions were all part of the order of the day in the fascist countries.

The workers were supposed to be compensated for these unfavorable conditions in a number of ways. First, they had the benefits of the *Dopolavoro* (After Work) and *Strength Through Joy* movements, through which the workers participated in low-cost vacation trips, sports, concerts, plays, operas, vaudeville and moving-picture performances, lectures, art exhibits, tours of museums and art galleries, and other recreational and educational events. However, they had almost no freedom of choice or conduct in their leisure-time activities and were the "beneficiaries" of a strong program of political education in these activities—which meant that plays, movies, concerts, operas, lectures, and other activities were all coordinated with the fascist philosophy. In the long run the workers themselves did much of the paying for the activities of *Dopolavoro* and *Strength Through Joy*, and these activities were regarded by the fascist leaders in part as a means of keeping the workers out of mischief in their spare time. The activities were also intended to keep the workers reasonably happy and contented, so that they would be easier to govern and more productive.

Second, the workers were supposedly compensated by the relative certainty of finding employment as the fascist systems moved through preparedness to war, but the satisfaction provided by full employment was

lessened by the prevalence of working conditions that approached slavery, and by lowered real incomes and scales of living. Third, the workers gained something under the systems of social security which the fascist governments maintained, although many people were not covered by some of the types of social insurance, the benefits received by the insured were often pitifully inadequate, and the cost of the insurance was borne to a great extent by the workers themselves. Finally, there was the joy the workers were expected to experience in realizing that they were a vital part of a national community which the fascist leaders contended was constantly growing in power and prestige. According to these leaders, the main issue with the workers was not their ridiculous wage-pennies or food and clothing, but rather the dignity and honor of their position. Such contentions require no comment here.

The Distribution of Income. In the fascist countries, the distribution of income remained distinctly of the capitalistic type. With productive wealth privately owned and most industries privately operated, individuals were allowed to receive rent, interest, and profits as well as wages and salaries. There was no tendency for the proportion of the national income going into wages, salaries, and other earned compensation to increase in relation to that going into profits, undistributed profits, interest and dividends, and rent. In fact, the tendency was in the opposite direction, and inequality in the distribution of income among persons increased. There was clearly no feature of the distribution of income in the fascist countries which could be regarded as a desirable accomplishment of fascism unless it was that great inequality in its distribution among individuals was not allowed to accomplish all of its usual evil results, since large portions of the incomes of all classes were taken by the government for its own purposes.

Evaluation of Fascism. The virtually complete governmental control over economic activity which developed in the fascist countries may have resulted in the elimination of some of the competitive wastes of capitalism, but any such gain was offset by an increase in bureaucracy and red tape; by countless regulations, forms, reports, and questionnaires; and by bribery, "wangling," and the necessity of worming into the good graces of fascist officials. The tendency toward industrial concentration and combination which the fascist governments sponsored may have improved the economic position of the surviving enterprises, besides simplifying the problems of governmental regulation and control. However, any joy which the large business men in fascist countries may have experienced at being relieved of their smaller competitors must have faded rapidly as the party leaders themselves went into business and used the powers of the one-party state for their own economic gain. The economic successes achieved by these party men were extraordinary, and the increases in their wealth and income were often compared with the loot and booty

of the robber barons. On the whole, however, there is little reason to think that the technical efficiency of production was lowered significantly under fascism.

Indeed, it may be said that the fascist system of economic control did not compare unfavorably with other systems of complete governmental control from the point of view of the technical efficiency of production and management. In other words, it appears that the fascist system of leaving the risks and responsibilities of operating economic enterprises to private individuals and stimulating these persons by means of competition and the prospect of private profit, while making sure, through governmental controls, that the total economic results produced were appropriate to national goals, may have produced better results on the whole than the Russian system of outright governmental ownership and operation.

However, the results of fascism in terms of efficiency were far from adequate to justify the existence of such a system. Instead of merely maintaining efficiency, a fascist system would have to show tremendously superior efficiency, and a disposition to allocate the results of such efficiency to increasing the economic welfare of the people, before it could make up for the almost complete loss of political and economic freedom which its operation entails. Actually, with no remarkable gains in production, and with an ever-increasing portion of the national income being devoted to the ends of the state rather than to consumption by the people, the loss of political and economic freedom led only to lowered real incomes, reduced scales of living, and hardship and suffering.

Such great sacrifices on the part of the people might conceivably have been justified if the ends sought by the fascist states had been noble and humane. Actually, however, the general goal which the fascist countries were seeking—that of attaining national power and glory by means of economic independence and aggressive warfare—was both monstrous and inhumane. It is doubtful that the most persuasive of leaders could have kept the people of the fascist countries devoted to and enthusiastic about such an objective, if the government had been democratic and responsible to the people. In practice, of course, the objective in question was forced on the people by a strong dictatorial government which controlled almost every phase of their daily lives. And, in the end, the efforts of the fascist governments to reach their objective resulted in dismal failure. Fascism in Italy was unable to produce an economy and a nation which was strong even in time of war. In Germany, on the other hand, an effective war economy was unquestionably developed, but it proved entirely inadequate for the task of world conquest without which the gains that immediately resulted from military conquest could not be retained.

1. How were the governments of the fascist countries changed in the process of creating dictatorships? Explain.
2. Explain the principal characteristics of the ruling political party in the fascist countries.
3. What happened to the rights and liberties of the individual citizens under the fascist government?
4. How was opposition to fascism suppressed?
5. "In the fascist countries, the program for the suppression of opposition had a strong racial tinge." Explain.
6. What was the fascist theory with regard to the relations of individuals and the state? Explain.
7. Discuss the nature and significance of the economic institutions of fascism.
8. How and to what extent did the governments of the fascist countries control industry?
9. Explain fascist policies and accomplishments in the field of agriculture.
10. Why is it often said that fascist attempts to control prices were not conspicuously successful?
11. Outline fascist policies in the field of commercial and investment credit and banking.
12. "The fascists used practically every known device in controlling the international trade of their countries." Explain.
13. Why is it often said that the fascist countries reduced the status of labor virtually to the level of slavery? Explain.
14. How were the workers supposed to be compensated for their lowly status under fascism? Explain.
15. What happened to the distribution of income under fascism?
16. Present a general evaluation of fascism.
17. Were the governments of the fascist countries successful in attaining their objectives? Give details.

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